CMT-CQ1

SERVICE MANUAL

Ver 1.0 2003. 05

US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model

- CMT-CQ1 is composed of following models.
  As for the service manual, it is issued for each component model, then, please refer to them.

COMPONENT MODEL NAME

	CMT-CQ1
COMPACT DISK DECK RECEIVER SYSTEM	HCD-CQ1
SPEAKER SYSTEM	SS-CCQ1

- Abbreviation
  AUS : Australian model.
  CND : Canadian model.
  HK : Hong Kong model.
  KR : Korean model.
  MX : Mexican model.
  SP : Singapore model.
  TW : Taiwan model.

SPECIFICATIONS

General

Power requirements
North American model: 120 V AC, 60 Hz
European model: 230 V AC, 50/60 Hz
Australian model: 230 V AC, 50/60 Hz
Mexican model: 120 V AC, 60 Hz
Korean model: 220 V AC, 60 Hz
Taiwan model: 120 V AC, 50/60 Hz
Hong Kong model: 220 V AC, 50/60 Hz
Other models: 230 V AC, 50/60 Hz
Power consumption
North American and Mexican models:
40 watts
European model: 40 watts
0.35 watts (in the standb y mode)
Other models: 40 watts
Dimensions (w/h/d) Approx. 190 × 120 × 235 mm incl. projecting parts and controls
Mass Approx. 3.5 kg
Supplied accessories Remote (1)
R6 (size AA) batteries (2)
AM loop antenna (1)
FM lead antenna (1)

Design and specifications are subject to change without notice.

PARTS LIST

Part No.	Description	Remark
	ACCESSORIES	
	**********	
1-477-884-11	COMMANDER, STANDARD (RM-SCQ1)(FOR WHITE)	
1-477-884-21	COMMANDER, STANDARD (RM-SCQ1)(FOR BLACK)	
1-501-374-72	ANTENNA, LOOP (AM)	
⚠1-770-019-11	ADAPTER CONVERSION 3P(UK,HK)	
1-793-184-22	CONNECTOR (F TYPE ADAPTOR)(FM)	
4-228-952-11	COVER, BATTERY (FOR RM-SCQ1)(FOR WHITE)	
4-228-952-21	COVER, BATTERY (FOR RM-SCQ1)(FOR BLACK)	
4-244-819-11	MANUAL, INSTRUCTION (ENGLISH)	(US,CND,AEP,UK,HK,SP,TW,AUS)
4-244-819-21	MANUAL, INSTRUCTION (FRENCH)(US,CND)	
4-244-819-31	MANUAL, INSTRUCTION (FRENCH,SPANISH)(AEP,SP,MX)	
4-244-819-41	MANUAL, INSTRUCTION (GERMAN,DUTCH,ITALIAN,SWEDISH,POLISH)(AEP)	
4-244-819-51	MANUAL, INSTRUCTION (TRADITIONAL CHINESE)	(HK,SP,TW)
4-244-819-61	MANUAL, INSTRUCTION (KOREAN)(KR)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

MICRO HI-FI COMPONENT SYSTEM

9-877-322-01
2003E1600-1
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Sony Corporation
Home Audio Company
Published by Sony Engineering Corporation

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REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2003.05	New

HCD-CQ1

SERVICE MANUAL

Ver. 1.3 2005.01

US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model

This set is the tuner, CD and amplifier section in CMT-CQ1.

CD SECTION	Model Name Using Similar Mechanism	NEW
	CD Mechanism Type	CDM76-K6BD44S
	Base Unit Type	BU-K6BD44S
	Optical Pick-up Type	KSS-213D/Q-RP

SPECIFICATIONS

Main unit

Amplifier section

AUDIO POWER SPECIFICATIONS: (U.S.A. model only)

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:
With 6-ohm loads, both channels driven, from 120 - 10,000 Hz; rated 10 watts per channel minimum RMS power, with no more than 10% total harmonic distortion from 250 milliwatts to rated output.

North American model:
Continuous RMS power output (reference): 10 + 10 W (6 ohms at 1 kHz, 10% THD)

European and Australian models:
DIN power output (rated): 8 + 8 W (6 ohms at 1 kHz, DIN)
Continuous RMS power output (reference): 10 + 10 W (6 ohms at 1 kHz, 10% THD)
Music power output (reference): 20 + 20 W

Other models:
The following measured at AC 220 V, 50/60 Hz
DIN power output (rated): 8 + 8 W (6 ohms at 1 kHz, DIN)
Continuous RMS power output (reference): 10 + 10 W (6 ohms at 1 kHz, 10% THD)

The following measured at AC 240 V, 50/60 Hz
DIN power output (rated): 8 + 8 W (6 ohms at 1 kHz, DIN)
Continuous RMS power output (reference): 10 + 10 W (6 ohms at 1 kHz, 10% THD)

Inputs
PC/MD/TAPE IN (stereo minijack): Sensitivity 1.3 (MD)/ 820mV (PC/TAPE) impedance 47 kilohms

Outputs
PC/MD/TAPE OUT (stereo minijack): Sensitivity 250 mV, impedance 1 kilohm
PHONES (stereo minijack): Accepts headphones with an impedance of 8 ohms or more
SPEAKER: Accepts impedance of 6 to 16 ohms.

CD player section

System	Compact disc and digital audio system
Laser	Semiconductor laser (λ=780 nm) Emission duration: continuous
Frequency response	2 Hz – 20 kHz

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range	
North American model:	87.5 – 108.0 MHz (100-kHz step)
Other models:	87.5 – 108.0 MHz (50-kHz step)
Antenna	FM lead antenna 75 ohms unbalanced
Antenna terminals	10.7 MHz
Intermediate frequency	

AM tuner section

Tuning range	530 – 1,710 kHz
Pan-American model:	(with the tuning interval set at 10 kHz) 531 – 1,710 kHz (with the tuning interval set at 9 kHz)
European model:	531 – 1,602 kHz (with the tuning interval set at 9 kHz)
Other models:	530 – 1,710 kHz (with the tuning interval set at 10 kHz) 531 – 1,602 kHz (with the tuning interval set at 9 kHz)
Antenna	AM loop antenna, external antenna terminal
Intermediate frequency	450 kHz

— Continued on next page —

MICRO Hi-Fi COMPONENT SYSTEM

9-877-323-04
2005A16-1
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Personal Audio Company
Published by Sony Engineering Corporation

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General

Power requirements	
North American model:	120 V AC, 60 Hz
European model:	230 V AC, 50/60 Hz
Australian model:	230 V AC, 50/60 Hz
Mexican model:	120 V AC, 60 Hz
Korean model:	220 V AC, 60 Hz
Taiwanese model:	120 V AC, 50/60 Hz
Other models:	230 V AC, 50/60 Hz
Power consumption	
North American and Mexican models:	
	40 watts
European model:	40 watts
	0.25 watts (in the standby mode)
Other models:	40 watts
Dimensions (w/h/d)	Approx. 190 × 120 × 235 mm incl. projecting parts and controls
Mass	Approx. 3.5 kg

Design and specifications are subject to change without notice.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer: Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers’ instructions to use these instruments.

2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The “limit” indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

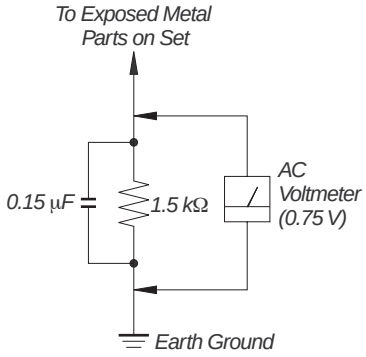

Fig. A. Using an AC voltmeter to check AC leakage.

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SECTION 1
SERVICING NOTES

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

CAUTION : INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
ADVARSEL : USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSAETTELSE FOR STRÅLING.
VORSICHT : UNSICHTBARE LASERSTRAHLUNG. WENN ABDECKUNG GEÖFFNET UND SICHEREITSVERRIEGELUNG ÜBERBRÜCKT. NICHT DEM STRAHL AUSSETZEN.
VARO! : AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING : OSYNLING LASERSTRÅLING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN.
ADVERSEL : USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES OG SIKKERHEDSLÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.
VIGYAZAT! : A BURKOLAT NYITÁSAKOR LÁTHATATLAN LÉZERSUGÁRVESZÉLY! KERÜLJE A BESUGÁRZÁST!

This caution label is located inside the unit.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of soldering iron around 270˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈSES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPÉMENTS PUBLIÉS PAR SONY.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

Unleaded solder

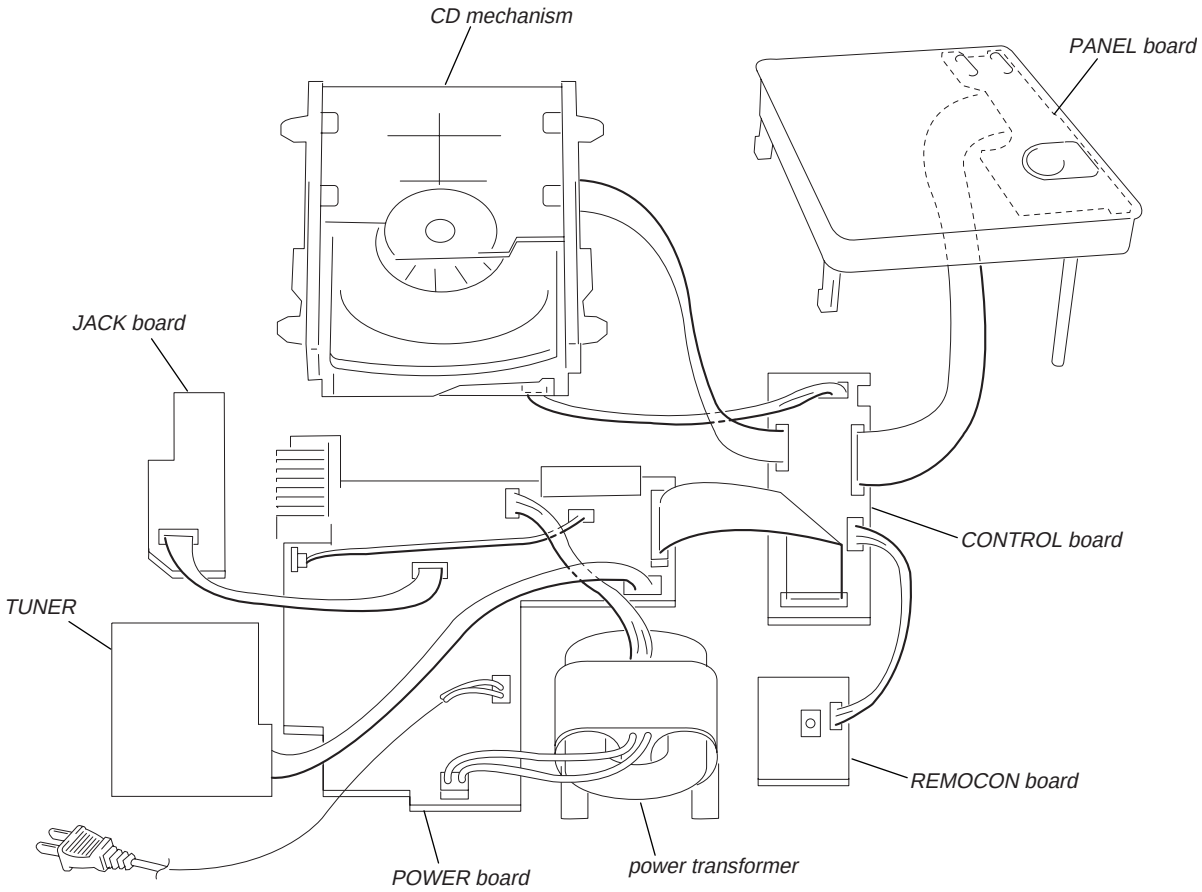
Boards requiring use of unleaded solder are printed with the lead-free mark (LF) indicating the solder contains no lead.
(Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size.)

: LEAD FREE MARK

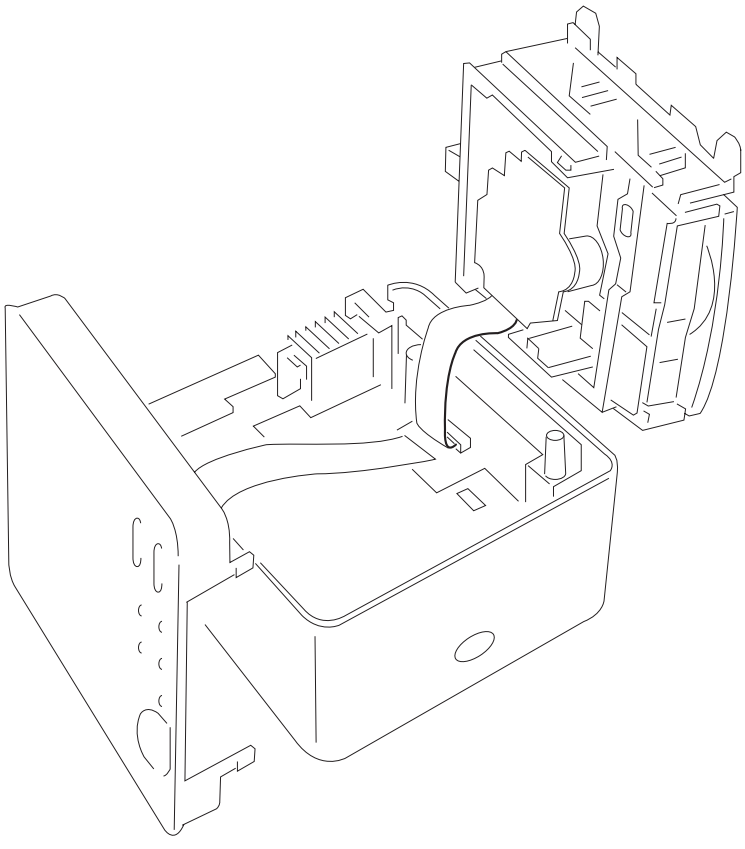
Unleaded solder has the following characteristics.

- Unleaded solder melts at a temperature about 40°C higher than ordinary solder.
  Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.
  Soldering irons using a temperature regulator should be set to about 350°C.
  Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!
- Strong viscosity
  Unleaded solder is more viscous (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.
- Usable with ordinary solder
  It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.

Service position of the Overall



Service position of the CD Mechanism Deck



SECTION 2
GENERAL

This section is extracted from instruction manual.

List of button locations and reference pages

How to use this page

Use this page to find the location of buttons and other parts of the system that are mentioned in the text.

Illustration number
↓
FUNCTION 2 (6, 7, 14, 16)
↑ Name of button/part ↑ Reference page

Main unit

ALPHABETICAL ORDER

A – F

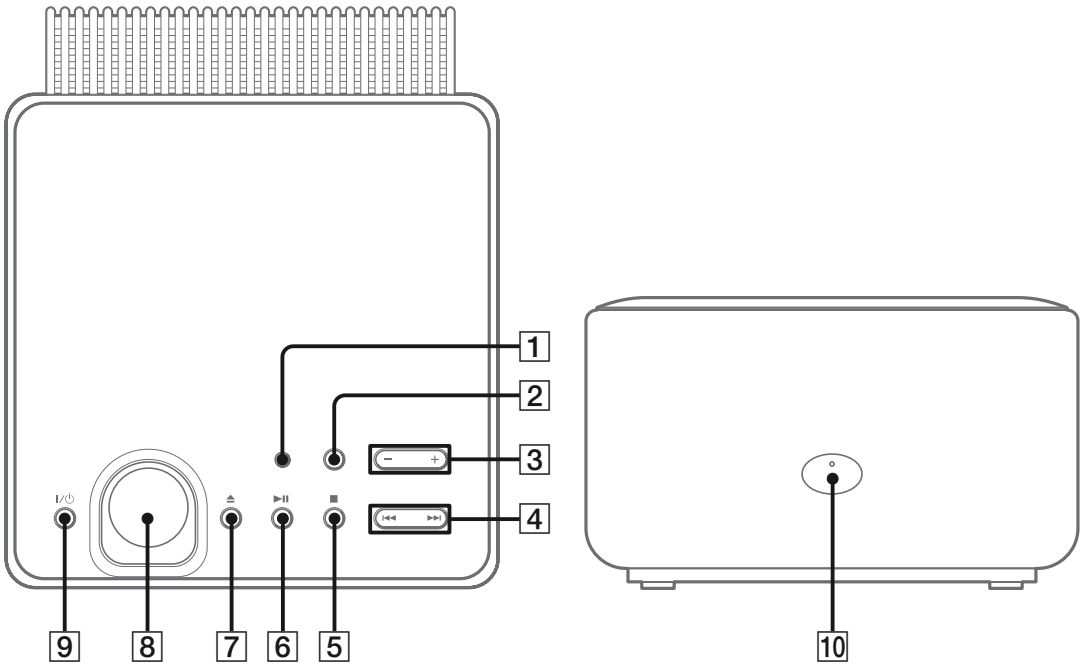
DIMMER 1 (13)
Display window 8
FUNCTION 2 (6, 7, 14, 16)

R – Z

Remote sensor 10
TUNING +/– 4 (8, 10)
VOLUME +/– 3 (11)

BUTTON DESCRIPTIONS

I/⏻ (power) 9 (4, 5, 9, 11, 14, 16)
⏮/⏭ (go back/go forward) 4 (5, 6, 7, 9, 11)
■ (stop) 5 (6, 14, 16)
⏯ (play/pause) 6 (6, 7)
⏏ (open/close) 7 (6)



Remote control

ALPHABETICAL ORDER

A – E

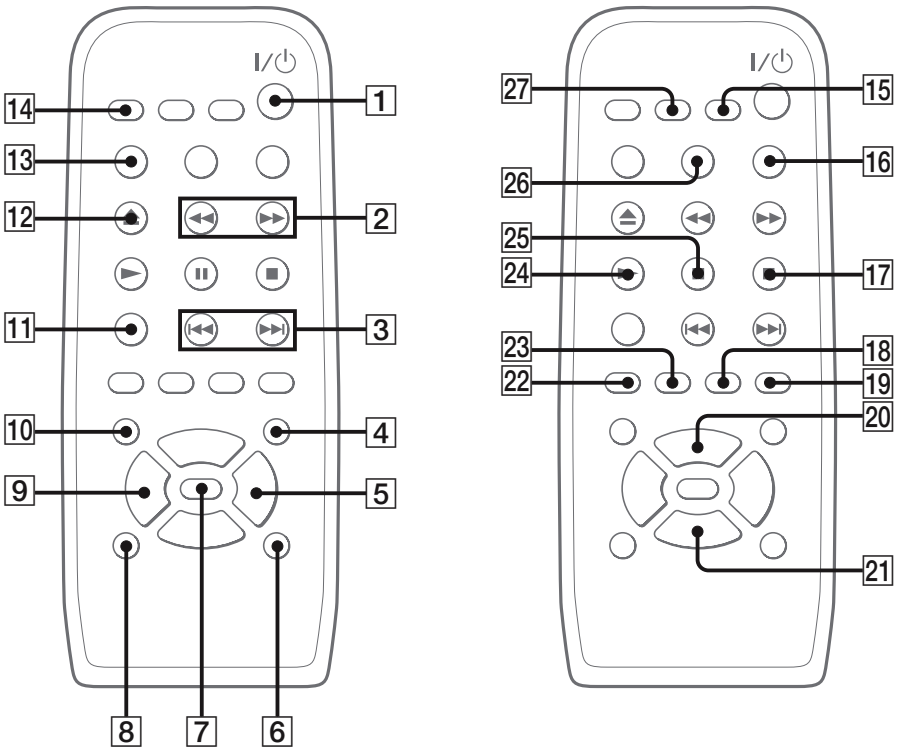
BALANCE 10 (10)
BASS 6 (10)
CENTER 7 (10)
CLEAR 26 (8)
CLOCK/TIMER SELECT 27 (12)
CLOCK/TIMER SET 15 (5, 11)
DISPLAY 13 (12, 13)
DSG 8 (10)
ENTER 16 (5, 7, 9, 11)
EQ + 5 (10)
EQ – 9 (10)

F – Z

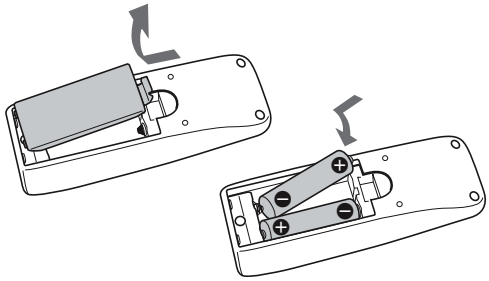
FM MODE 18 (10)
FUNCTION 22 (6, 7, 14, 16)
PLAY MODE 23 (6, 7)
REPEAT 18 (7)
SLEEP 14 (11)
TREBLE 4 (10)
TUNER BAND 11 (8, 10)
TUNER MEMORY 19 (8)
TUNING MODE 23 (8, 10)
TUNING +/– 3 (8, 10)
VOL + 20 (11)
VOL – 21 (11)

BUTTON DESCRIPTIONS

I/⏻ (power) 1 (4, 5, 9, 11, 16)
◀◀/▶▶ (fast forward/rewind) 2 (5, 6)
I◀◀/▶▶I (go back/go forward) 3 (5, 6, 7, 9, 11)
■ (stop) 17 (6, 16)
❚❚ (pause) 25 (6)
CD ► (play) 24 (6, 7)
OPEN/CLOSE ⏏ (open/close) 12 (6)



Inserting two R6 (size AA) batteries into the remote



Note

If you do not use the remote for a long period of time, remove the batteries to avoid possible damage from battery leakage and corrosion.

Tip

When the remote no longer operates the system, replace both batteries with new ones.

Setting the clock

Use buttons on the remote for the operation.

1 **Press I/⏻ to turn on the system.**

2 **Press CLOCK/TIMER SET.**

3 **Press ⏮/⏭ repeatedly to set the hour.**

4 **Press ENTER or ⏭.**

5 **Press ⏮/⏭ repeatedly to set the minute.**

6 **Press ENTER.**

The clock starts working.

To adjust the clock

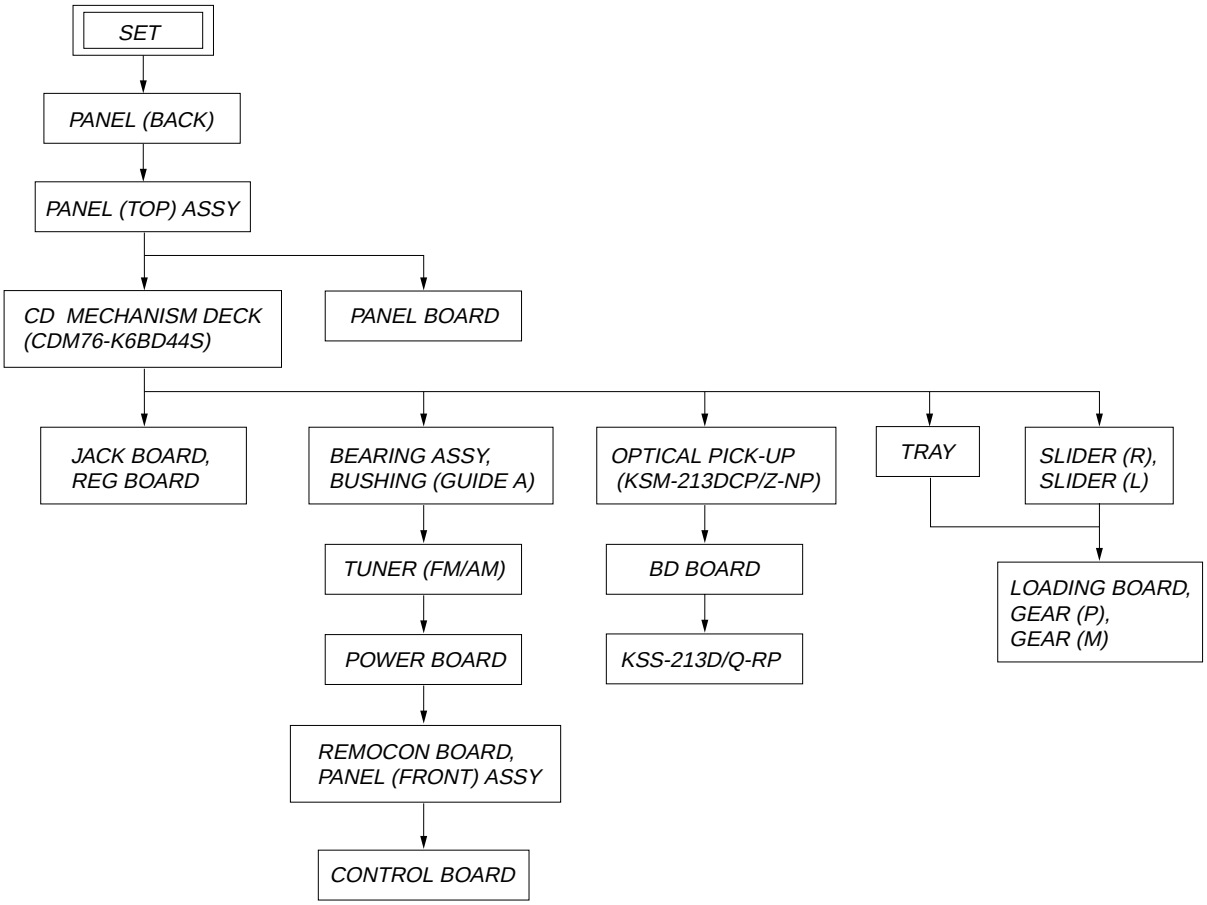
1 Press CLOCK/TIMER SET.

2 Press ⏮/⏭ repeatedly to select “CLOCK”, then press ENTER.

3 Do the same procedures as step 3 to 6 above.

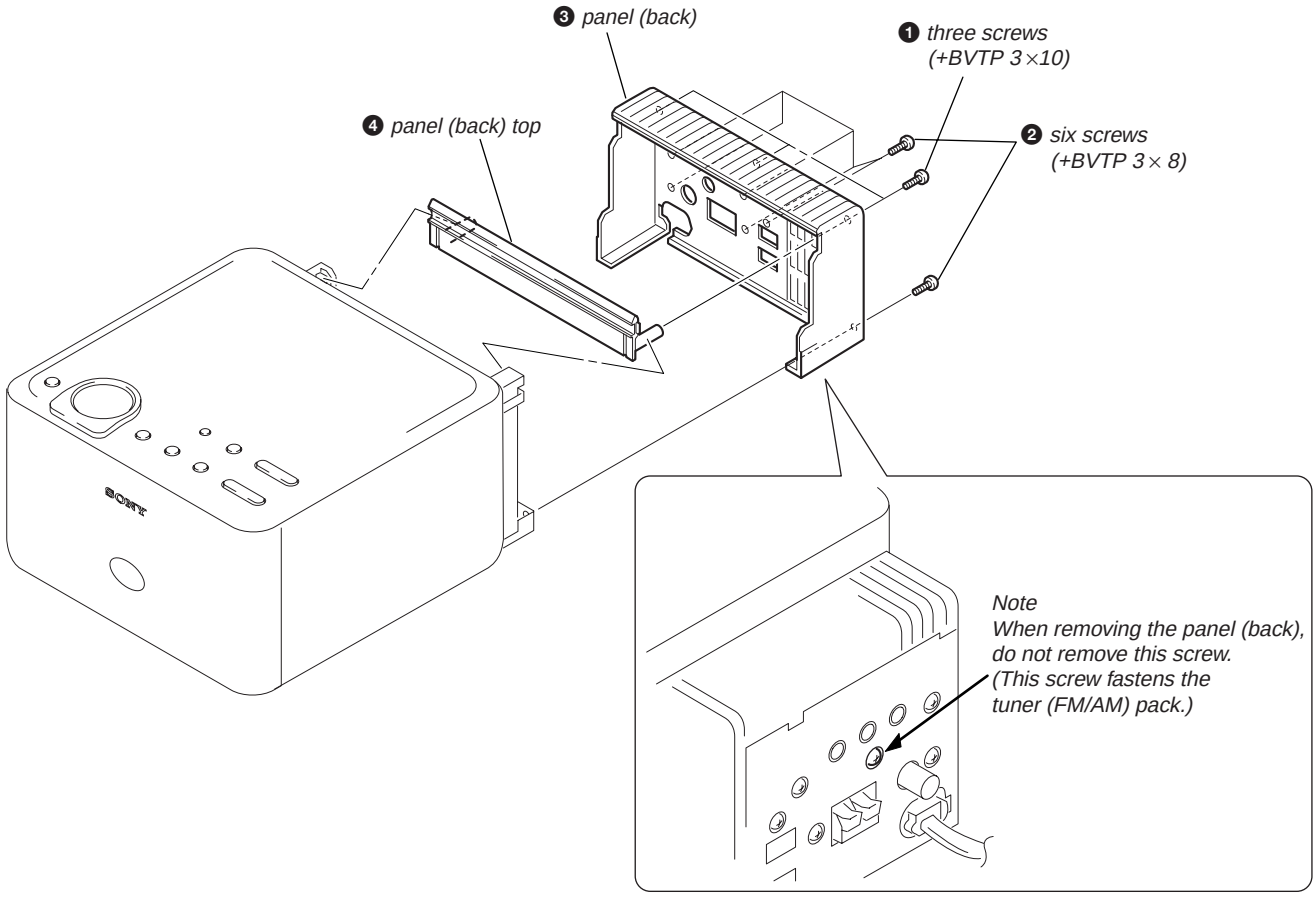
SECTION 3
DISASSEMBLY

• The equipment can be removed using the following procedure.

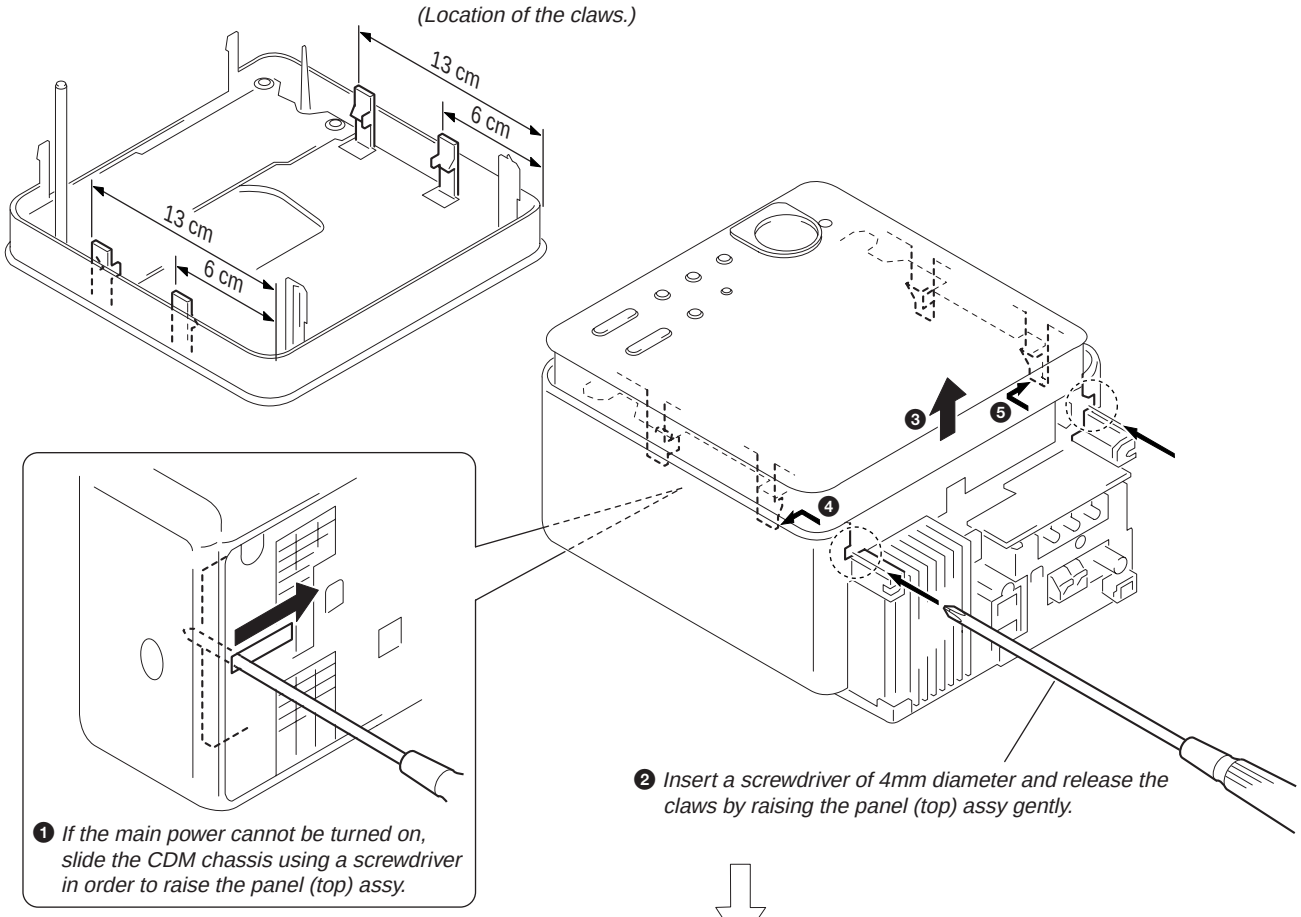


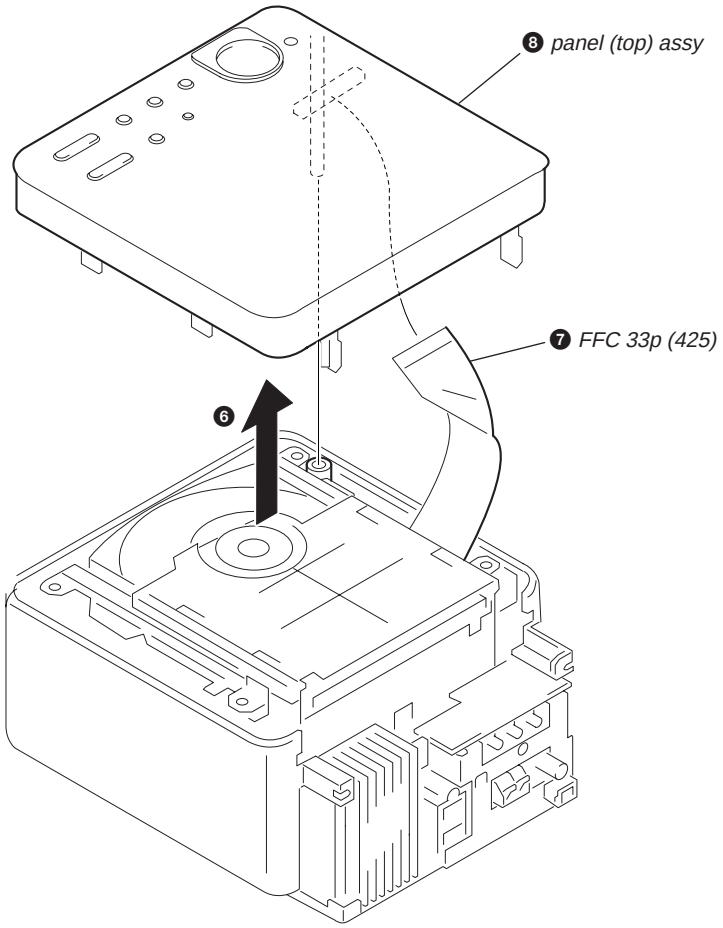
Note : Follow the disassembly procedure in the numerical order given.

3-1. Panel (Back)

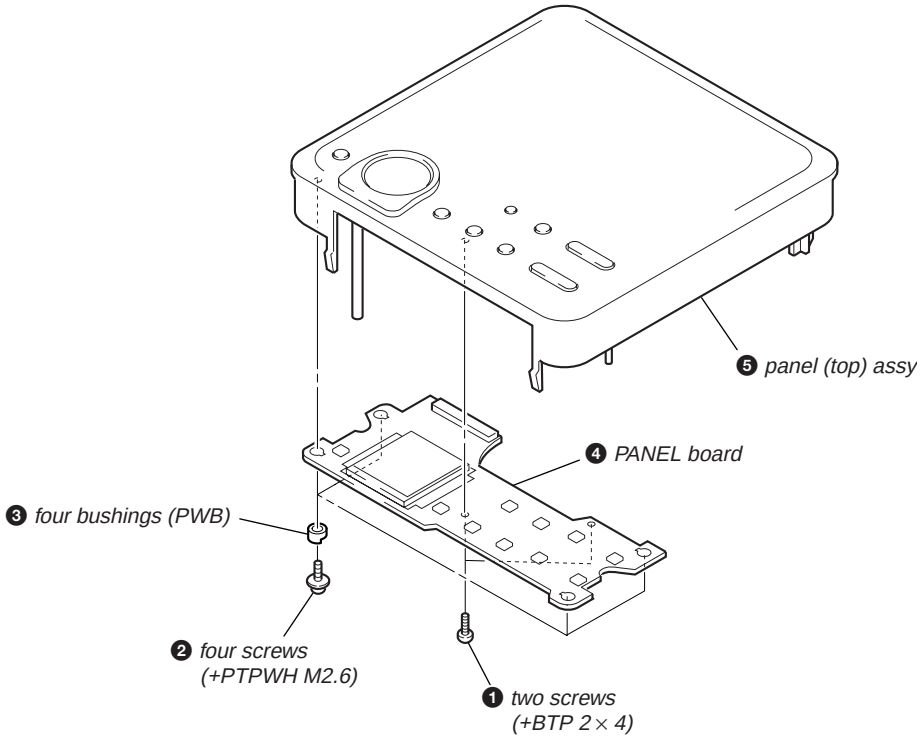

❸ panel (back)
❶ three screws (+BVTP 3×10)
❹ panel (back) top
❷ six screws (+BVTP 3× 8)
Note
When removing the panel (back), do not remove this screw. (This screw fastens the tuner (FM/AM) pack.)

3-2. Panel (Top) Assy

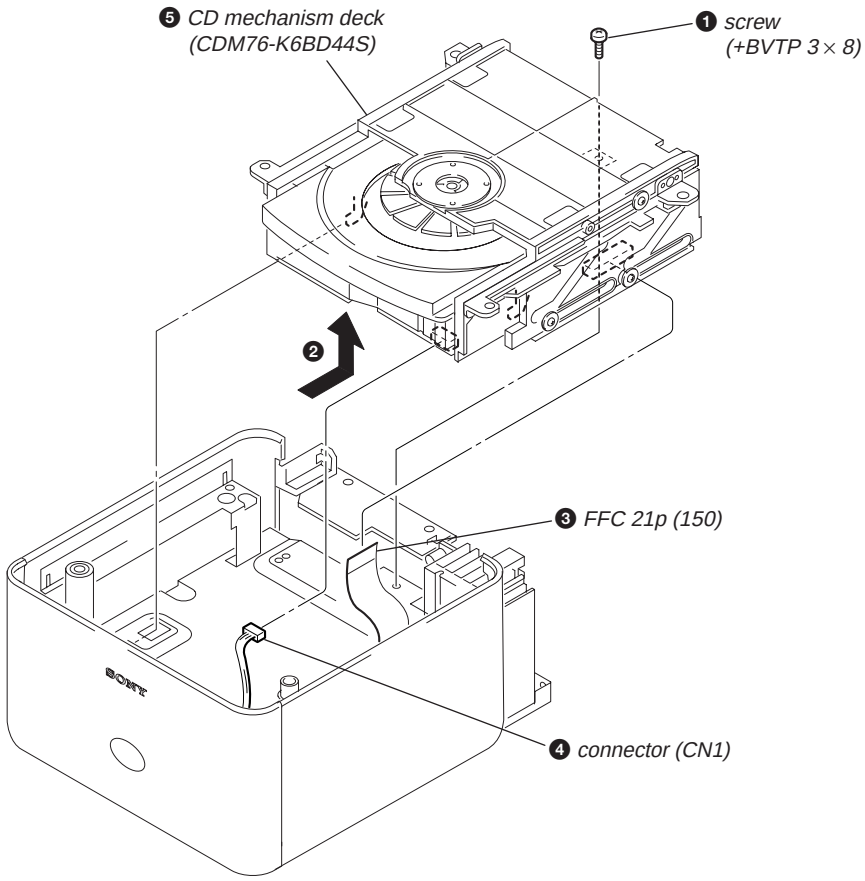

(Location of the claws.)
13 cm
6 cm
13 cm
6 cm
3
4
5
❶ If the main power cannot be turned on, slide the CDM chassis using a screwdriver in order to raise the panel (top) assy.
❷ Insert a screwdriver of 4mm diameter and release the claws by raising the panel (top) assy gently.



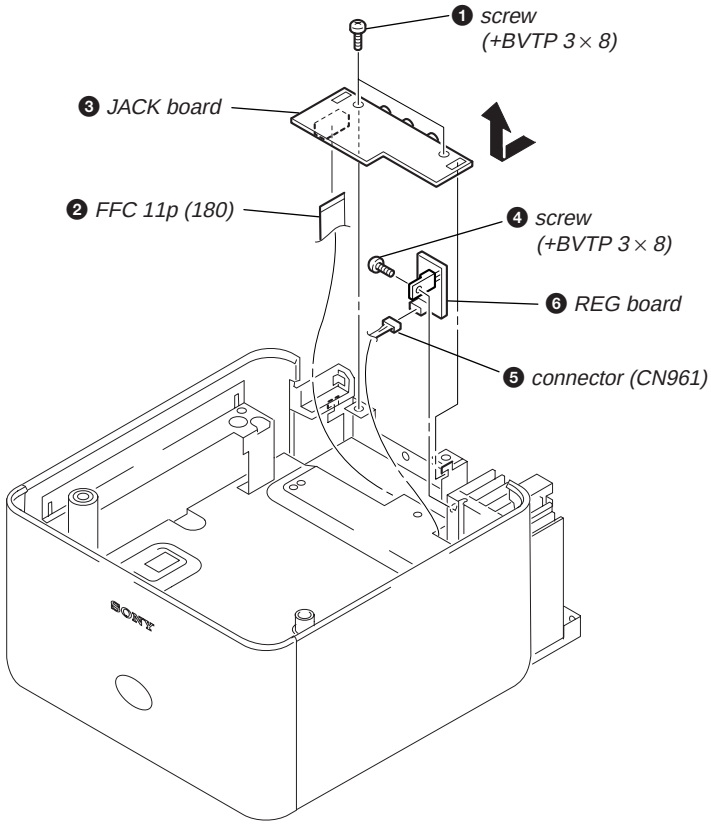
3-3. PANEL Board



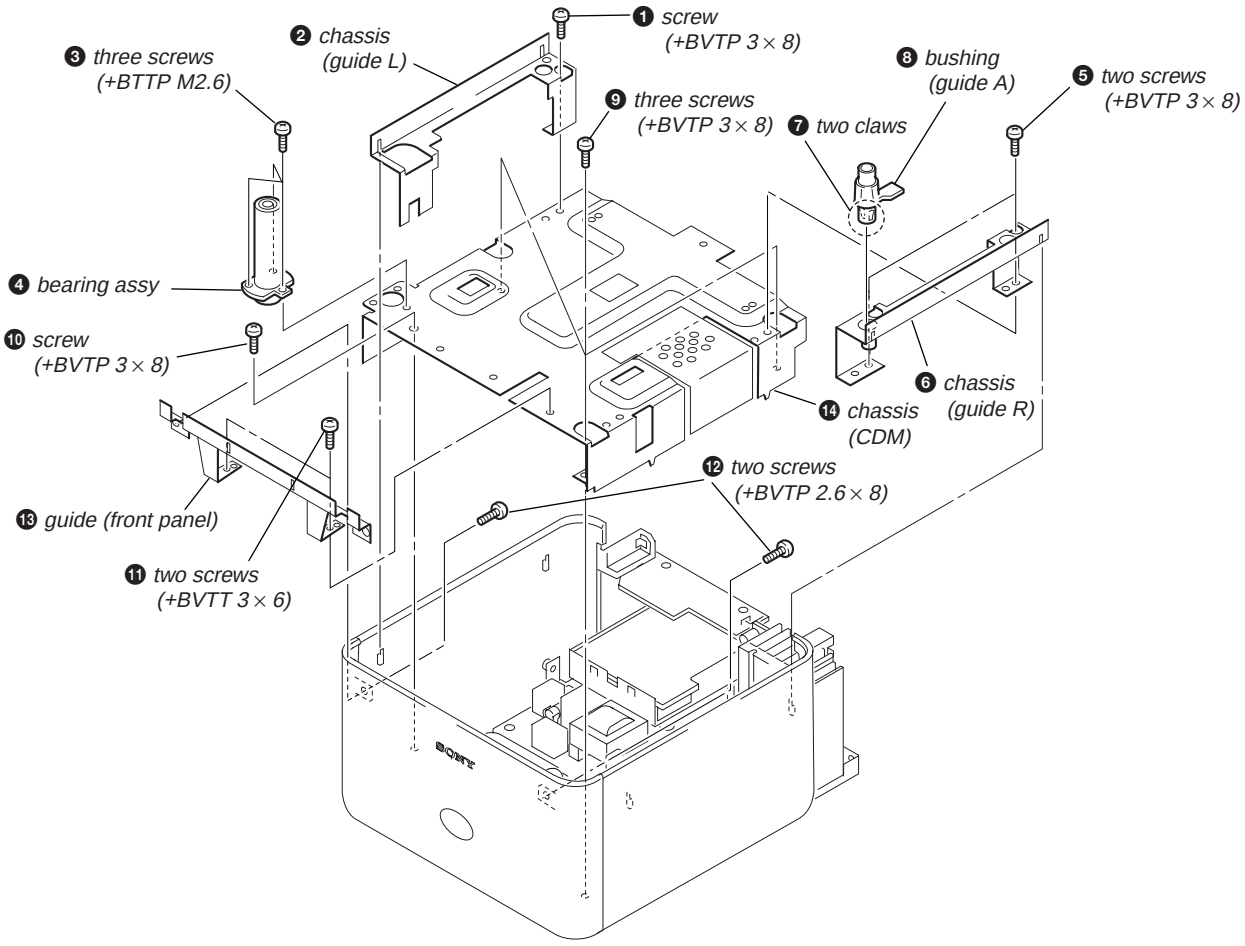
3-4. CD Mechanism Deck (CDM76-K6BD44S)



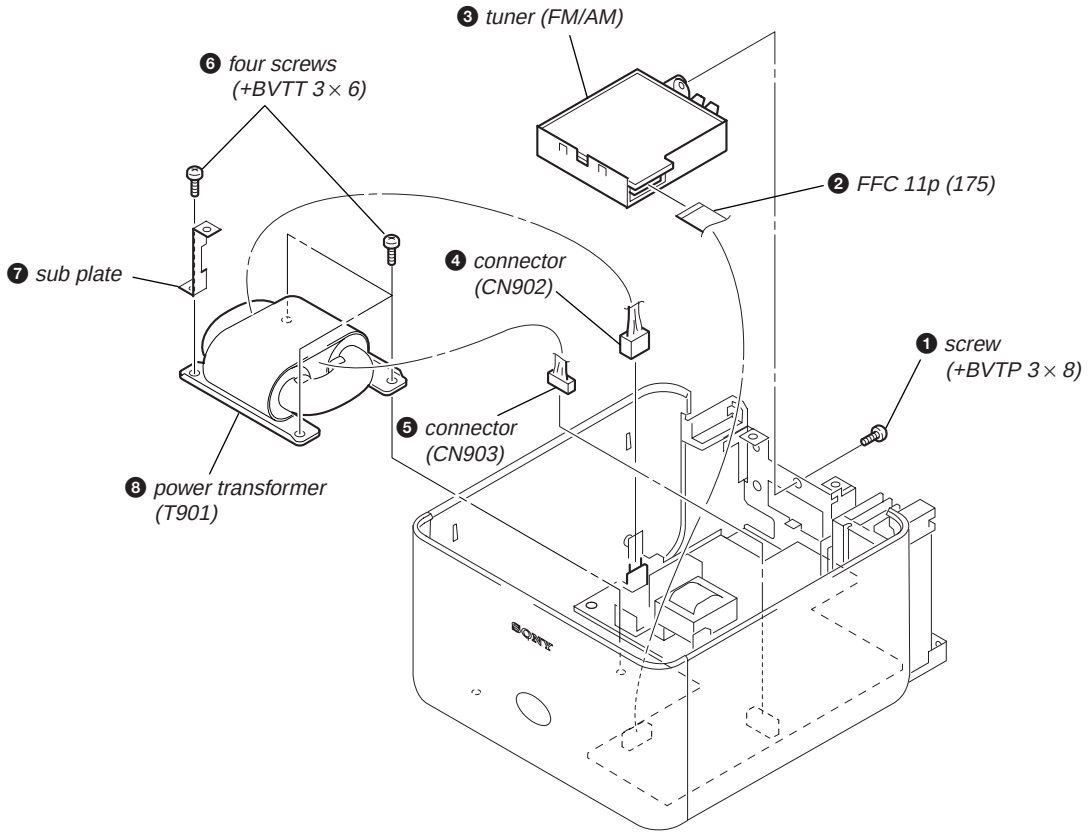
3-5. JACK Board, REG Board



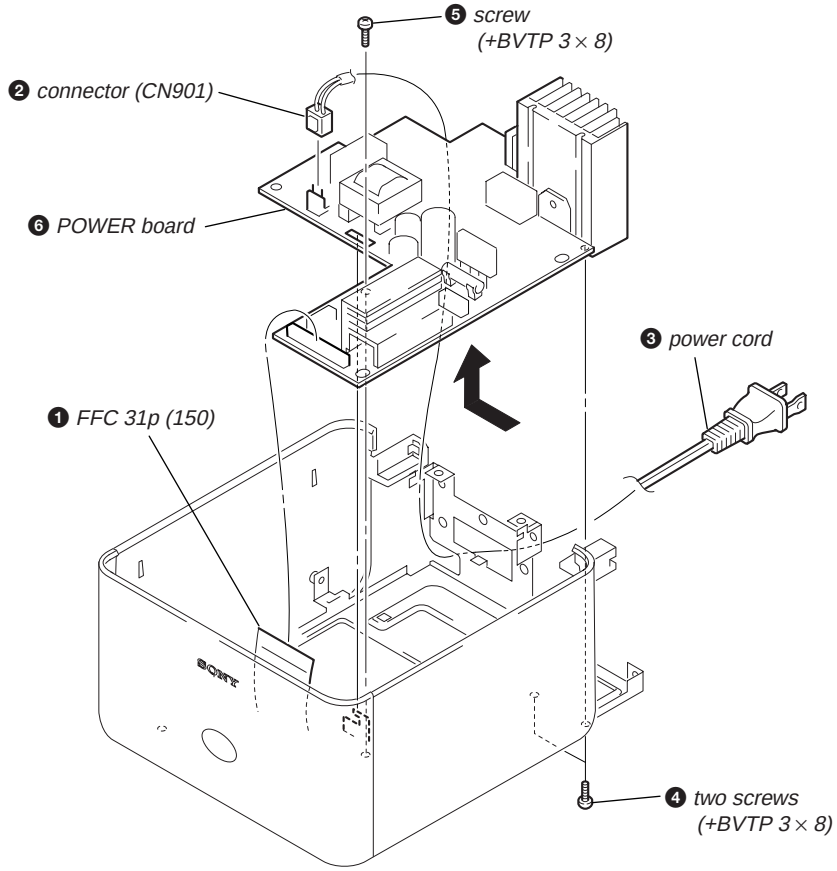
3-6. Bearing Assy, Bushing (Guide A)



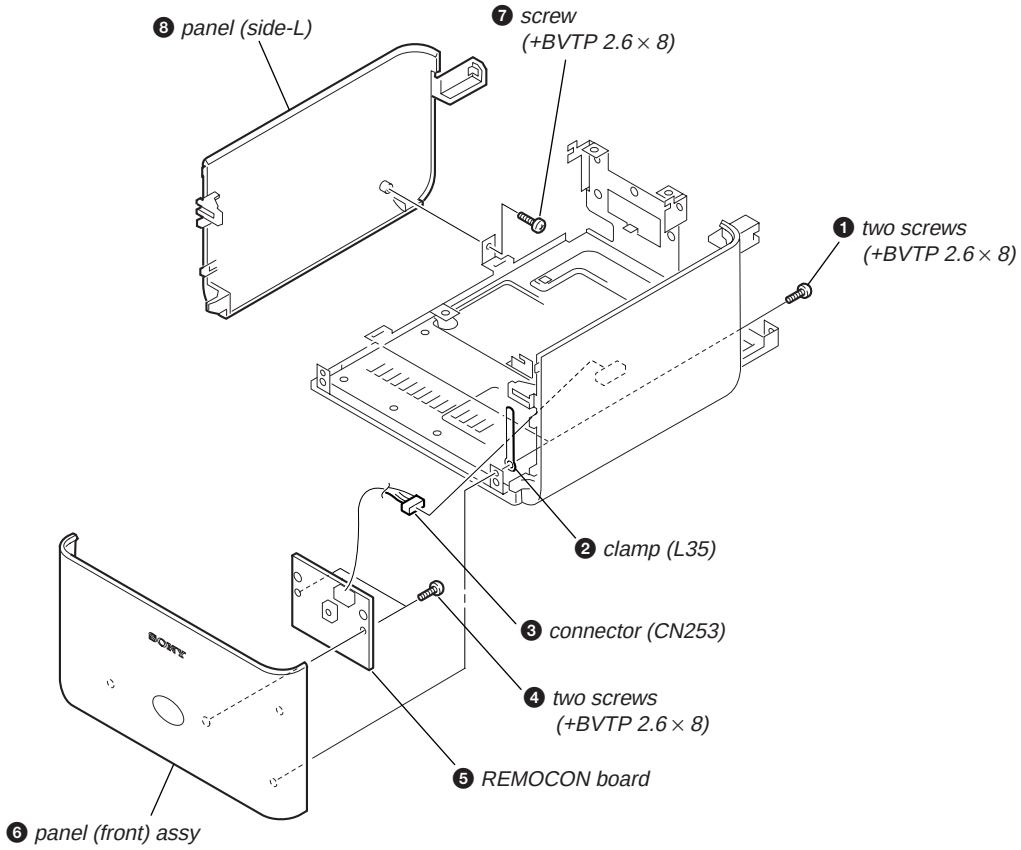
3-7. Tuner (FM/AM)



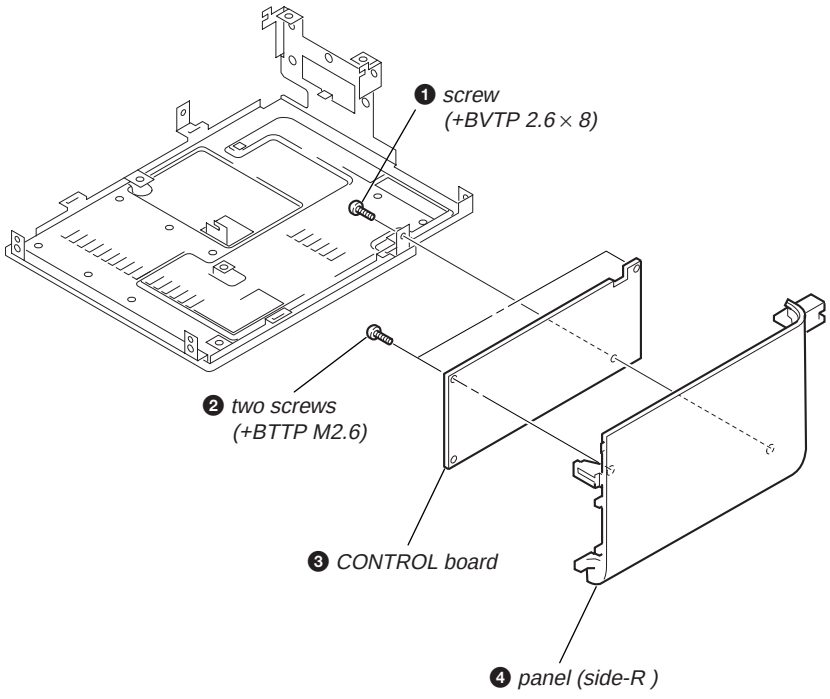
3-8. POWER Board



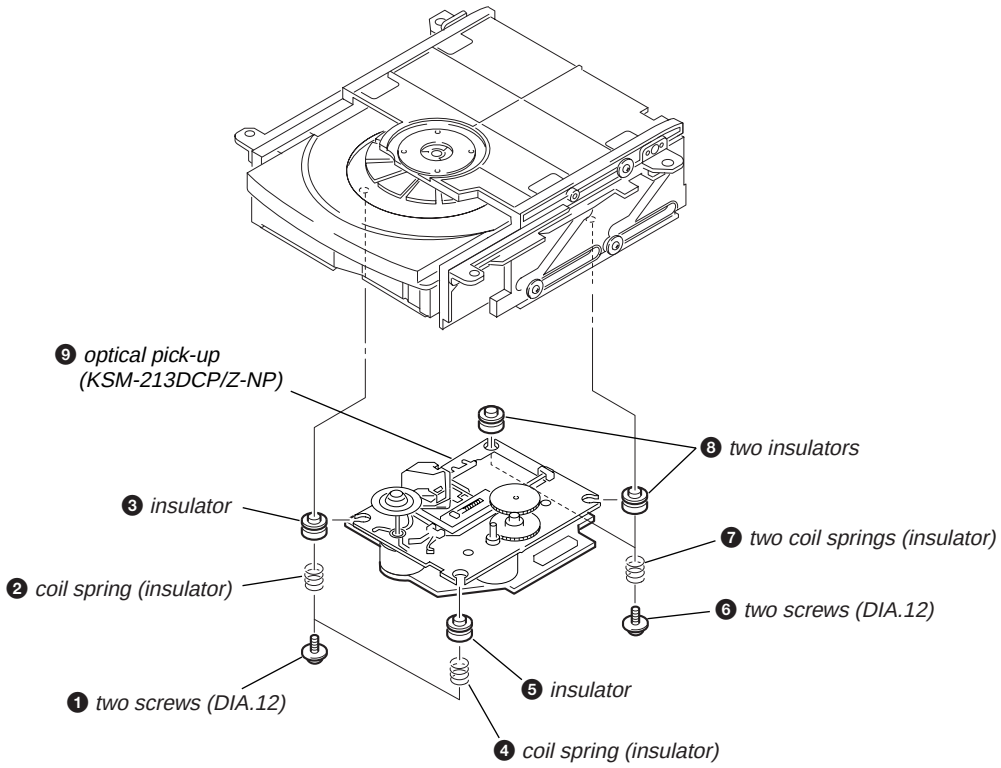
3-9. REMOCON Board, Panel (Front) Assy


8 panel (side-L)
7 screw (+BVTP 2.6 × 8)
1 two screws (+BVTP 2.6 × 8)
2 clamp (L35)
3 connector (CN253)
4 two screws (+BVTP 2.6 × 8)
5 REMOCON board
6 panel (front) assy

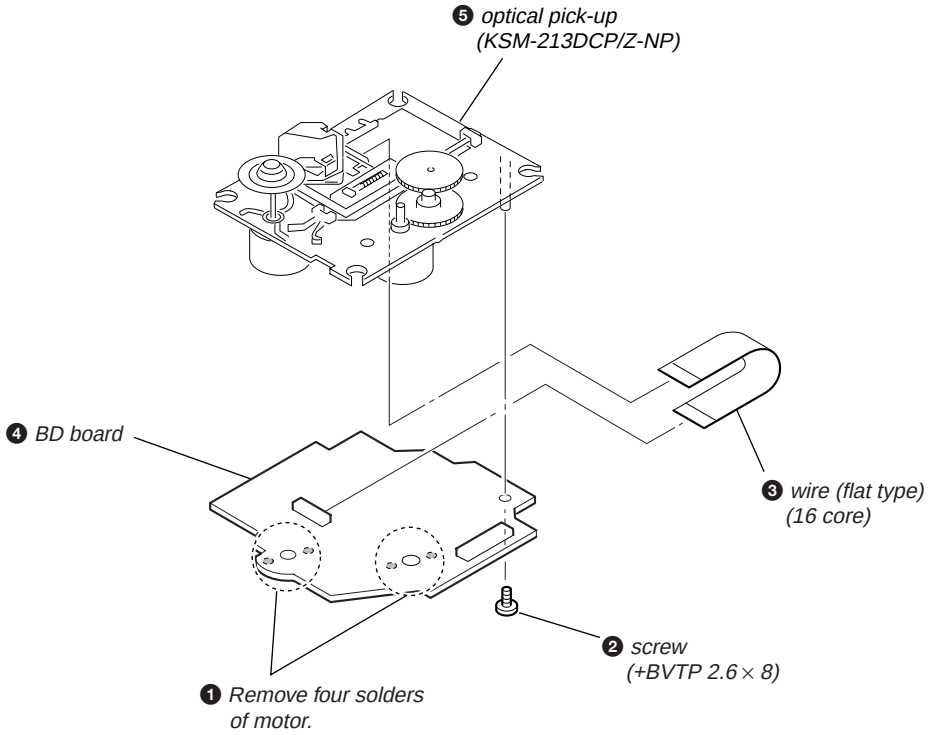
3-10. CONTROL Board



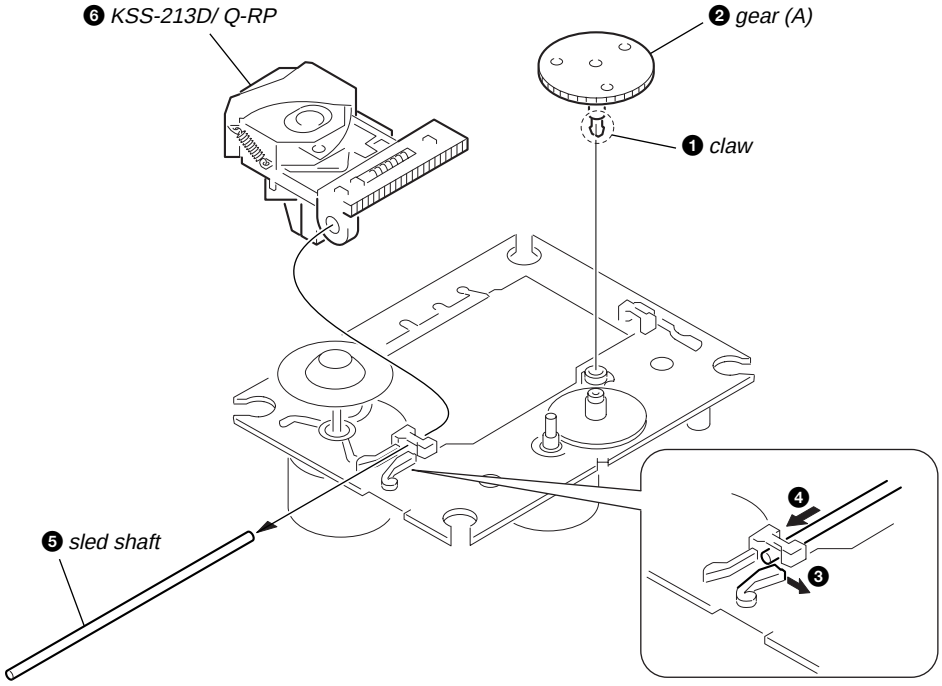
3-11. Optical Pick-Up (KSM-213DCP/Z-NP)



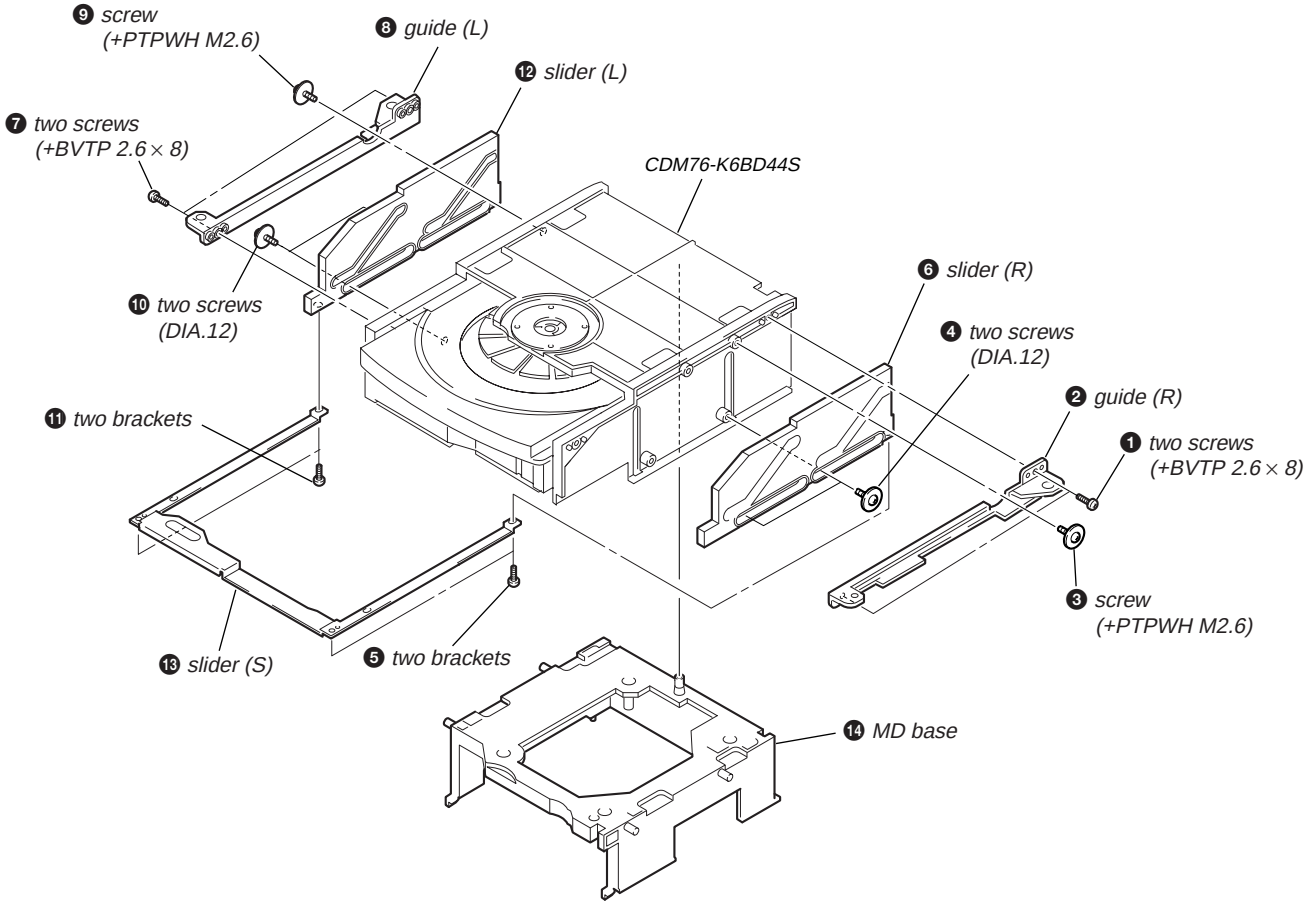
3-12. BD Board



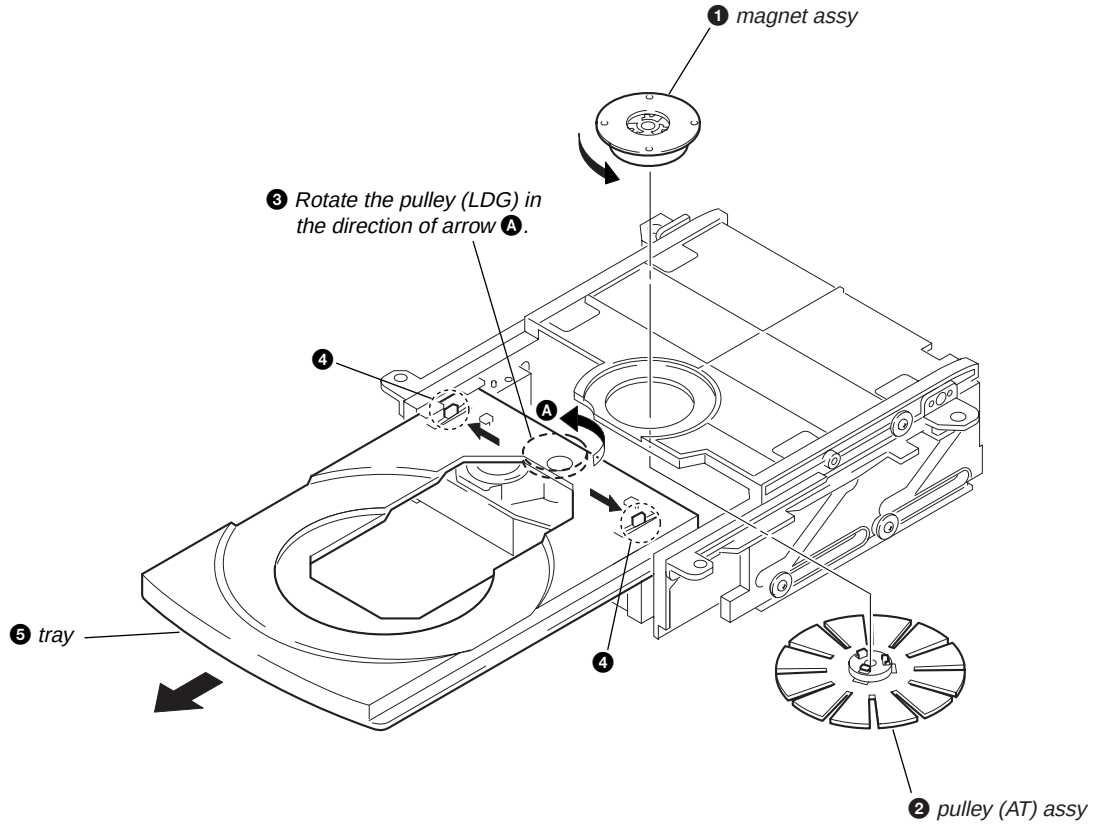
3-13. KSS-213D/Q-RP



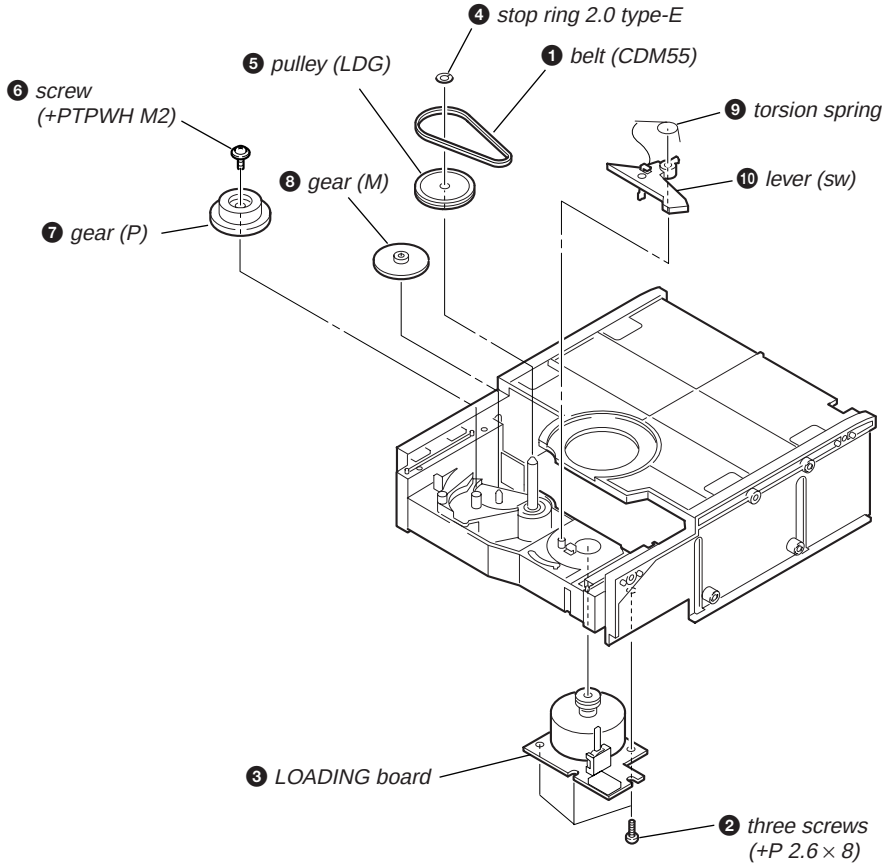
3-14. Slider (R), Slider (L)



3-15. Tray



3-16. LOADING Board, Gear (P), Gear (M)



SECTION 4
TEST MODE

[MC TEST MODE]

• This mode is used to check operations of Amplifier.

Procedure:

1. Press the I/⏻ key to turn the power ON.
2. Press three keys of VOLUME-, ■ and I/⏻ simultaneously.
3. When the MC test mode is activated, “MIN” is displayed on the liquid crystal display.
4. Press the VOLUME+ key, “MAX” is displayed on the liquid crystal disply.
   Press the VOLUME- key, “MIN” is displayed.
5. To release this mode, press the I/⏻ key.

[PANEL (GC) TEST MODE]

• This mode is used to check the liquid crystal display, LED, model, destination, software version and key.

Procedure:

1. Press the I/⏻ key to turn the power ON.
2. Press three keys of VOLUME+, ■ and I/⏻ simultaneously.
3. Liquid crystal display and LED are all turned on.
4. When you want to enter the model, destination and version display mode, press the ►II key. The model and destination are displayed alternately on the liquid crystal display.
5. Each time ►II key is pressed, the MC version or CD version is displayed on the liquid crystal display.
6. When ►►I key is pressed while the version numbers are being displayed except model and destination, year, month and day of the software creation display. When ►►I key is pressed again, the display returns to the software version display. When ►II key is pressed while year, month and day of the software creation are being displayed, the year, month and day of creation of the software versions are displayed on the liquid crystal display in the same order of version display.
7. Press the I◄◄ key, the key check mode is activated.
8. In the key check mode, the liquid crystal display displays “K0” on the liquid crystal display. Each time a key is pressed, “K” value increases. However, once a key is pressed, it is no longer taken into account.
9. To release this mode, press three keys in the same manner as step 2, or disconnect the power cord.

[COLD RESET]

• The cold reset clears all data including preset data stored in the RAM to initial conditions. Execute this mode when returning the set to the customer.

Procedure:

1. Press the I/⏻ key to turn the power ON.
2. Press three keys of FUNCTION, ■ and I/⏻ simultaneously.
3. The liquid crystal display becomes blank instantaneously, and the set is reset.

[CD TRAY LOCK MODE]

• This mode is used to unable to take sample disc out of tray in the shop.

Procedure:

1. Press the I/⏻ key to turn the power ON.
2. Press the FUNCTION key to select “CD”.
3. While pressing the ⏏ key, press the ■ key for 5 seconds.
4. The message “LOCK” is displayed on the liquid crystal display and the tray is locked. (Even if pressing the ⏏ key, the message “LOCK” is displayed on the liquid crystal display and the tray is locked)
5. To release from this mode, pressing the ⏏ key, press the ■ key for 5 seconds.
6. The message “FREE” is displayed on the liquid crystal display and the tray is unlocked.

[CD SERVICE MODE]

• This mode can run the CD sled motor freely. Use this mode, for instance, when cleaning the optical pick-up.

Procedure:

1. Press I/⏻ key to turn the power ON.
2. Press the FUNCTION key to select “CD”.
3. Press three keys of ■ , DIMMER and FUNCTION simultaneously.
4. Press ►►I key to move the optical pick-up to outside track, or press I◄◄ key to inside track.
5. To release this mode, press the I/⏻ key.

[AGING MODE]

• This mode can be used for operation check of CD section.

If an error occurred:

The aging operation stops only an error occurred.

If no error occurs:

The aging operation continues repeatedly.

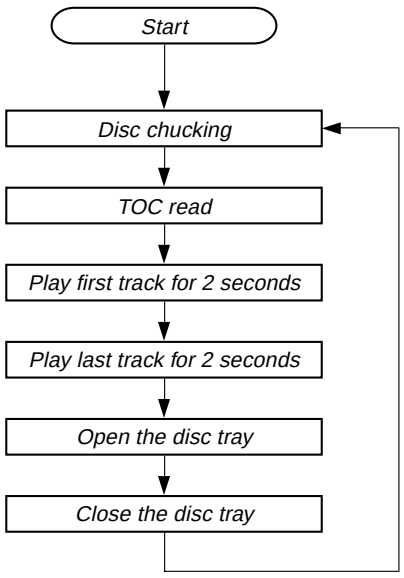
Procedure:

1. Press the I/⏻ key to turn the power ON.
2. Press the FUNCTION key to select “CD”.
3. Set disc on the tray.
4. Press three keys of VOLUME-, ►II and I/⏻ simultaneously.
5. Aging operation of CD is started.
6. To release this mode, press the I/⏻ key.

CD Aging Sequence

The sequence during the aging mode is following as below.
Display at the aging mode is the same as the normal operation.

Aging mode sequence :



[5 REPEAT OFF MODE]

- Number of repeat for CD playback is 5 times when the repeat mode is “REPEAT”. This mode is used to enables CD to repeat playback for limitless times.

Procedure:

1. Press the I/⏻ key to turn the power on.
2. Press the FUNCTION key to select “CD”.
3. Press three keys of VOLUME+, ■ and DIMMER simultaneously.
4. When the 5 repeat off mode is activated, “REP” blinks on the liquid crystal display.

[CHANGE-OVER FUNCTION NAME OF EXTERNAL INPUT AND OUTPUT]

- This mode is used to enable function name of external input and output to change over PC, MD or TAPE.

Procedure:

1. Press the I/⏻ key to turn the power on.
2. Press the FUNCTION key repeatedly until “PC”, “MD” or “TAPE” appears.
3. While pressing and holding the ■ key, press the I/⏻ key repeatedly until the desired function name (PC, MD or TAPE) appears.

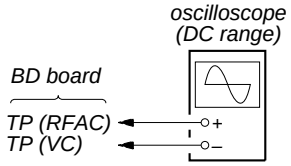
SECTION 5
ELECTRICAL ADJUSTMENT

CD SECTION

Note:

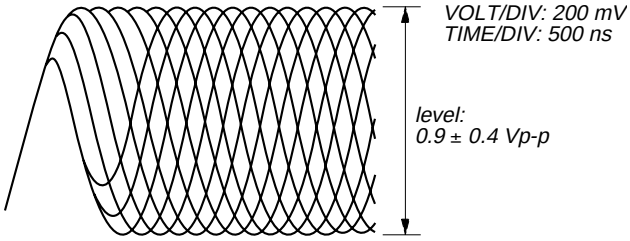
1. CD Block is basically constructed to operate without adjustment.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10 MΩ impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.
5. Check the focus bias check when optical pick -up block is replaced.

FOCUS BIAS CHECK



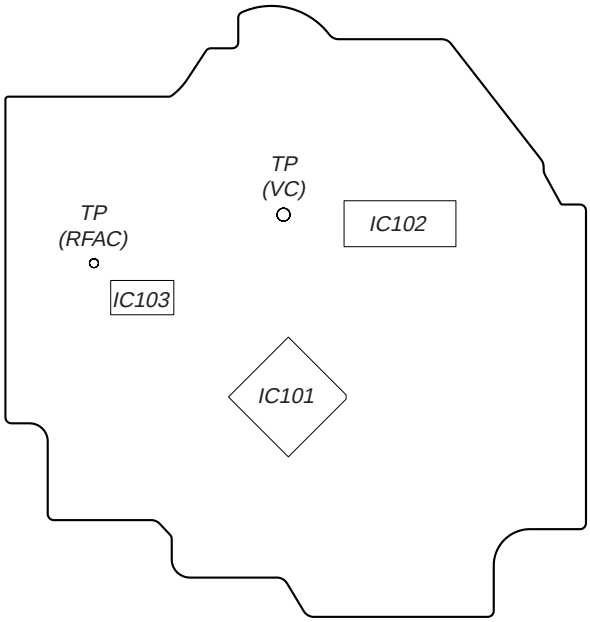
Procedure :

1. Connect oscilloscope to TP (RFAC) and TP (VC) on the BD board.
2. Press the I/⏻ button to turn the power ON, and press the ⏏ button to open the CD disc tray.
3. Set disc (YEDS-18) on the tray and press the ▶II button to playback.
4. Confirm that oscilloscope waveform is as shown in the figure below. (eye pattern)
   A good eye pattern means that the diamond shape (◇) in the center of the waveform can be clearly distinguished.



Checking Location:

– BD BOARD (Conductor Side) –



SECTION 6
DIAGRAMS

6-1. Note for Printed Wiring Boards and Schematic Diagrams

THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

For schematic diagrams.

Note:

- All capacitors are in µF unless otherwise noted. pF: µµF
  50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- : nonflammable resistor.
- : fusible resistor.
- : panel designation.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

- : B+ Line.
- : B– Line.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : CD PLAY
  < > : CD STOP
  ✻ : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  : TUNER
  : CD
  : LINE
- Abbreviation
  CND : Canadian model.
  MX : Mexican model.
  TW : Taiwan model.

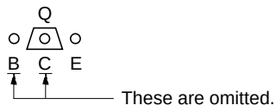
For printed wiring boards.

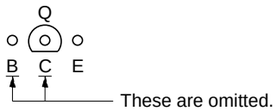
Note:

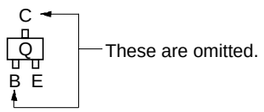
- : parts extracted from the component side.
- : parts extracted from the conductor side.
- △ : internal component.
- ○ : Through hole.
- : Pattern from the side which enables seeing.

Caution:
Pattern face side: (Conductor Side) Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side) Parts on the parts face side seen from the parts face are indicated.

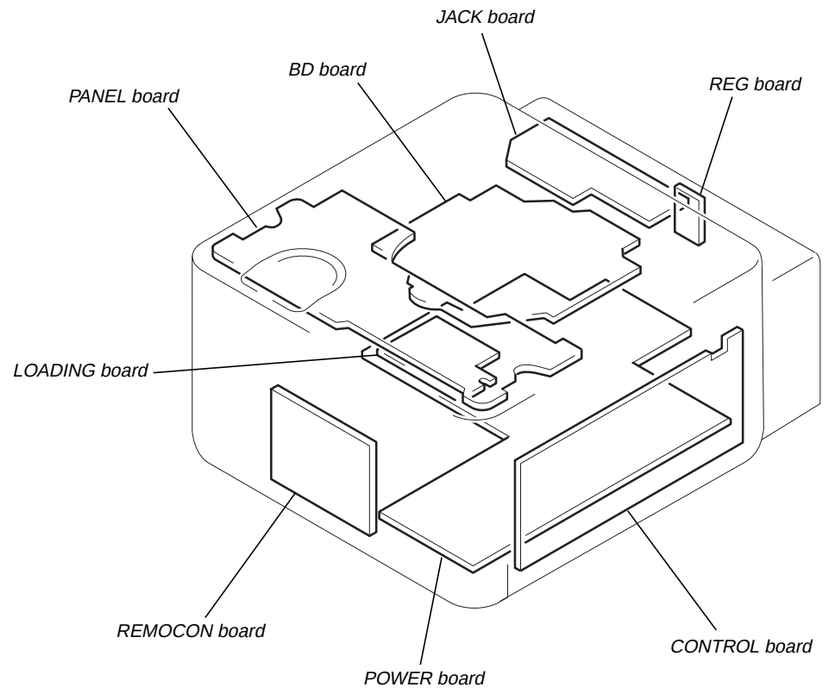
- **Indication of transistor**





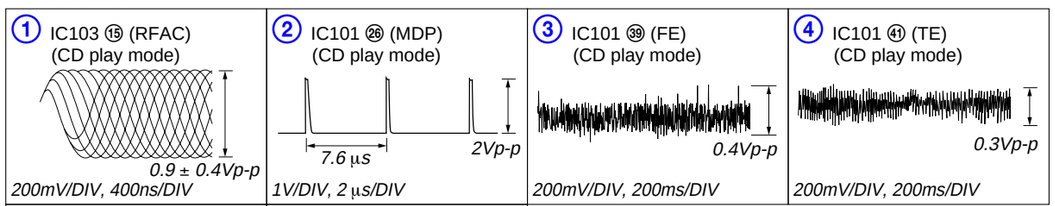


- **Circuit Boards Location**

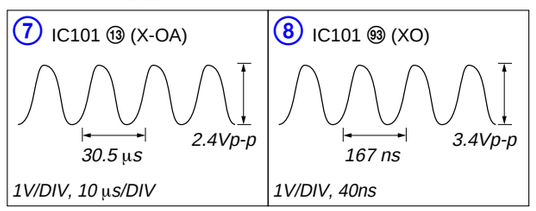


· Waveforms

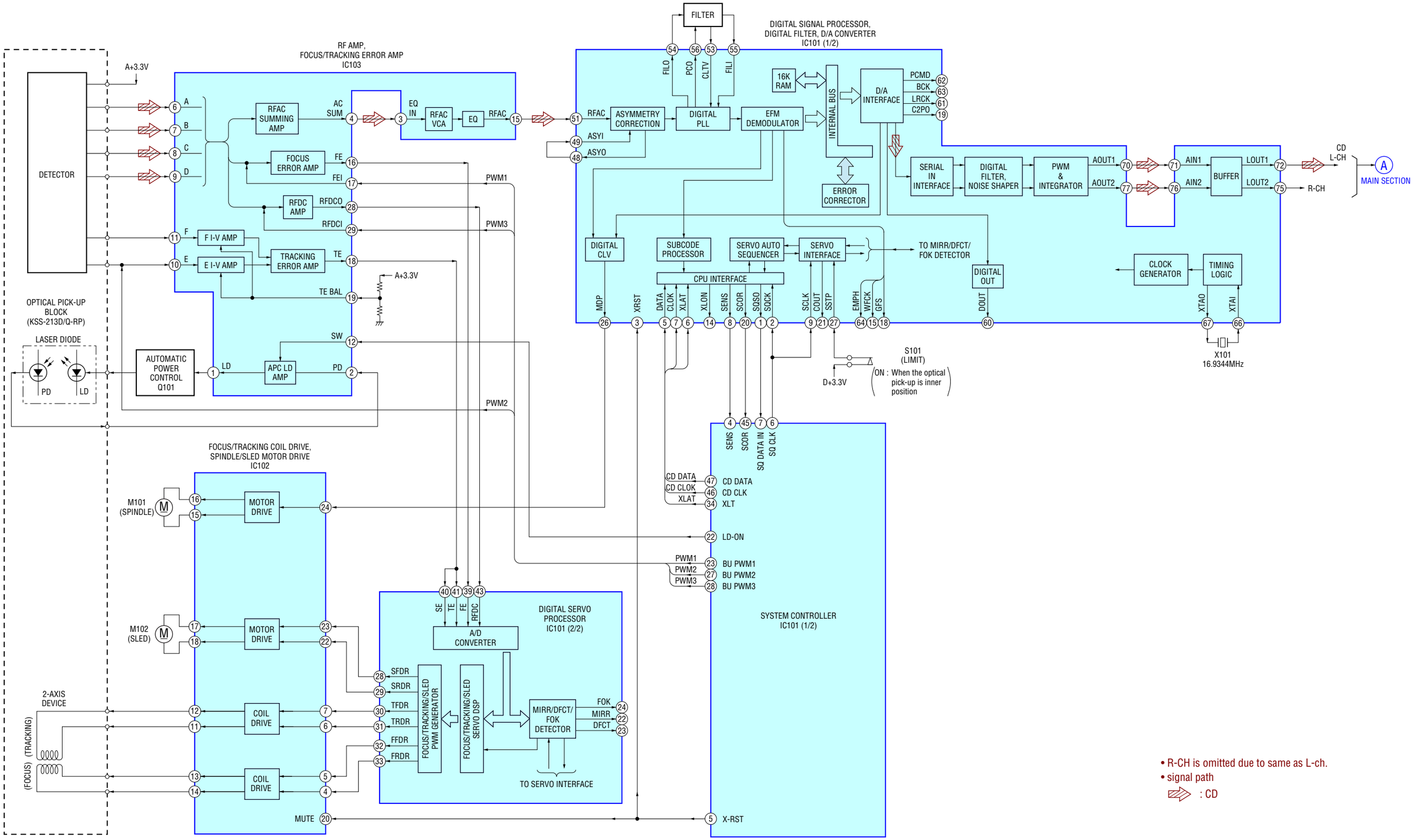
– BD Board –



– CONTROL Board –

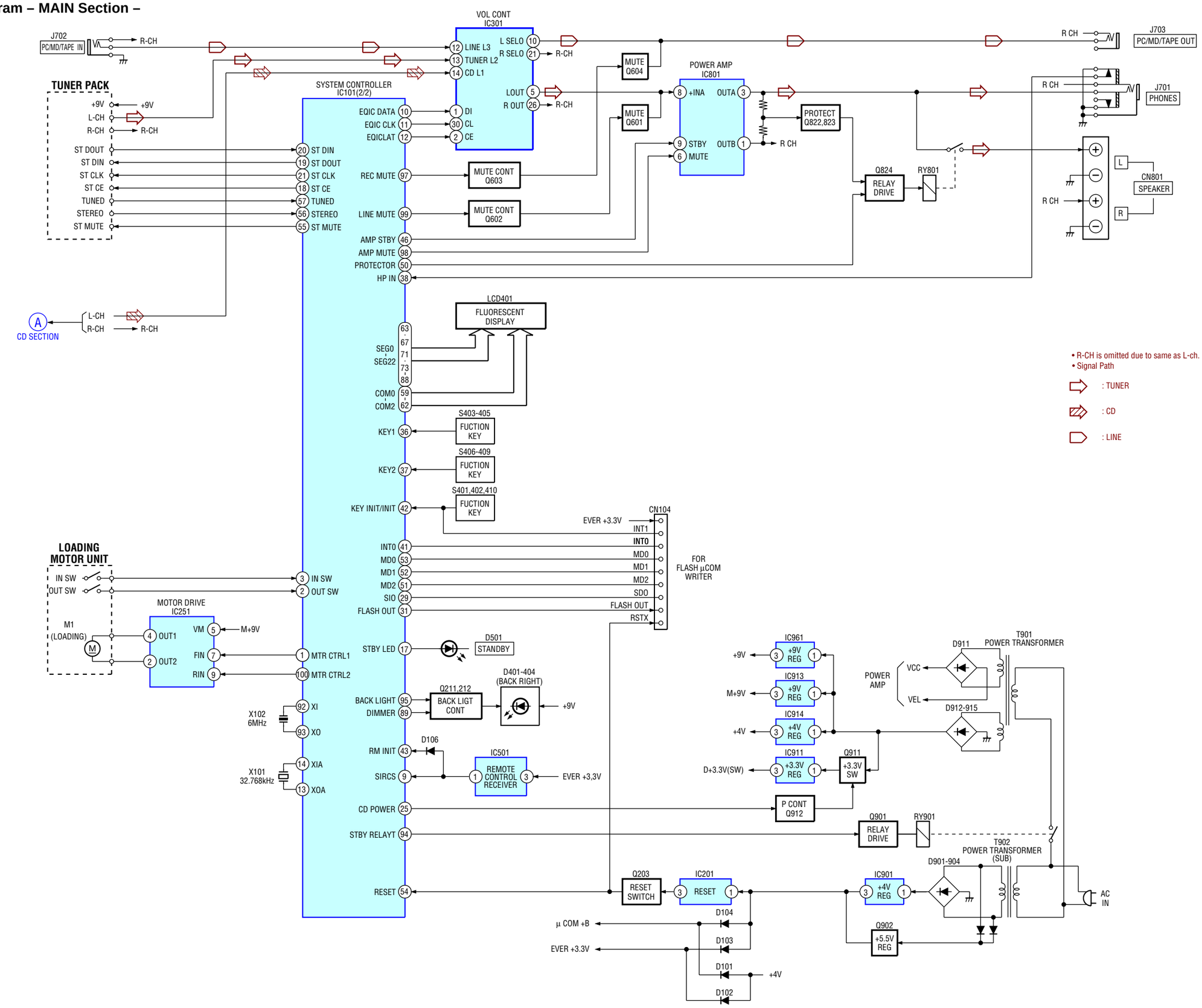


6-2. Block Diagram – CD Section –

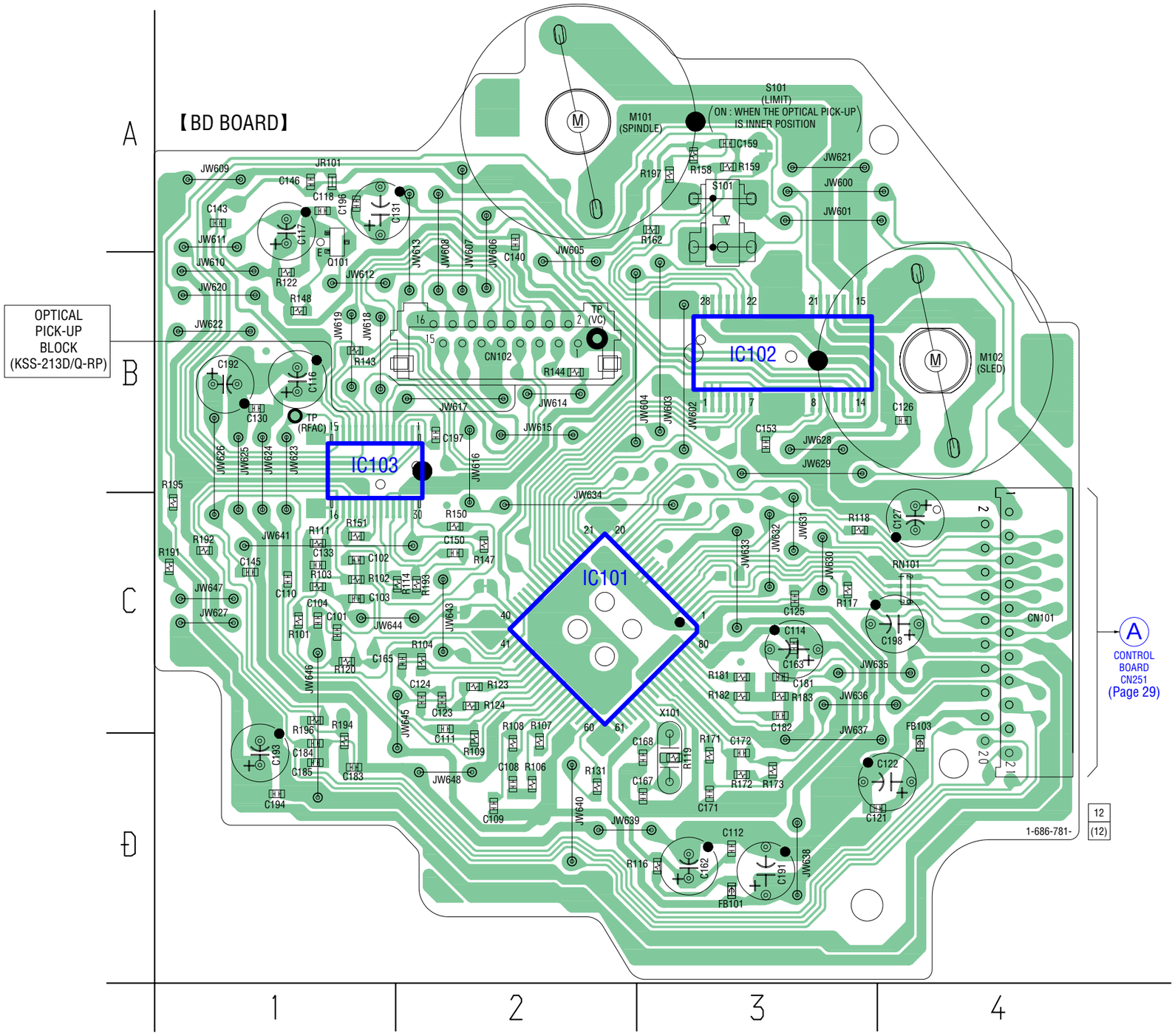


- R-CH is omitted due to same as L-ch.
- signal path
  ⇒ : CD

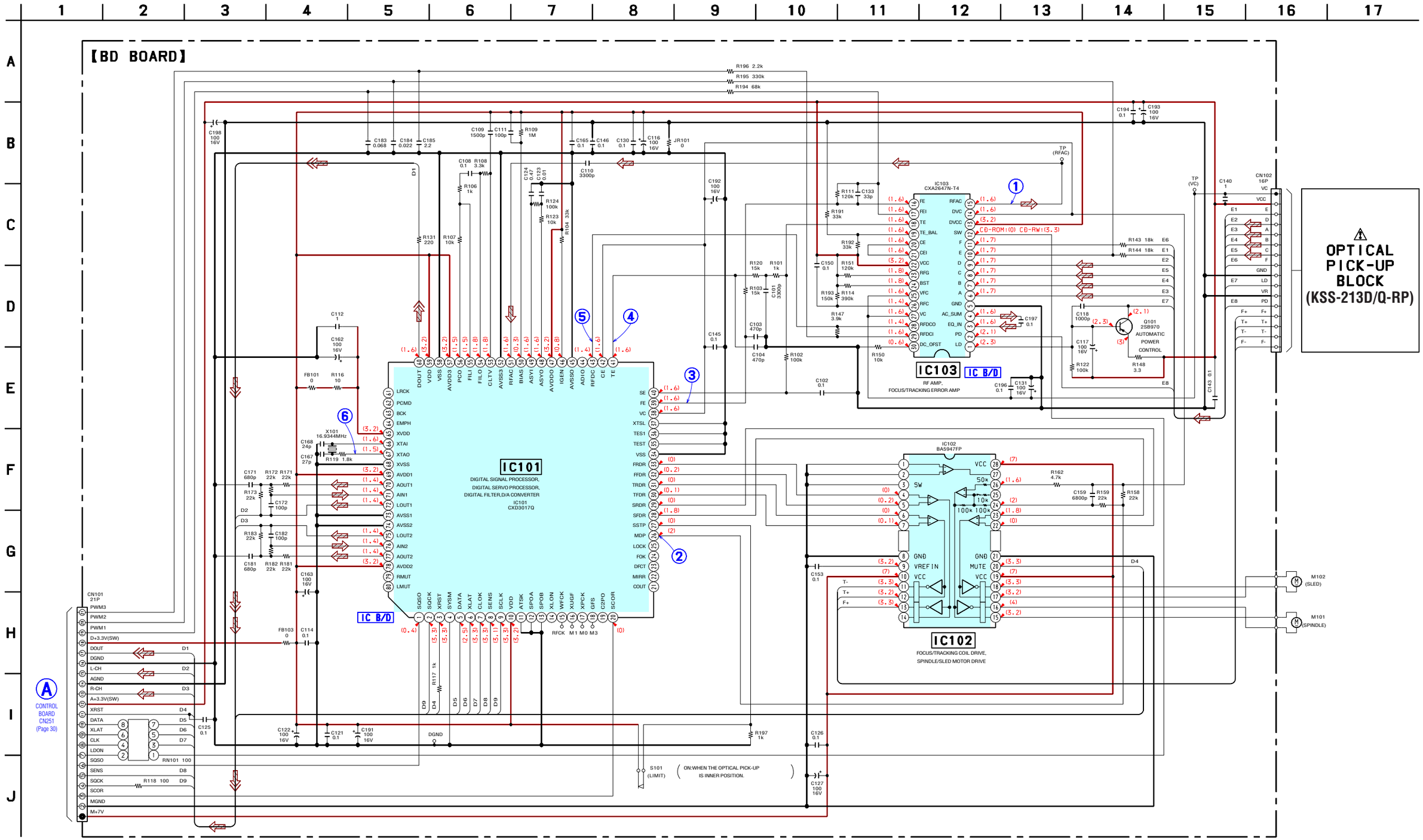
6-3. Block Diagram – MAIN Section –



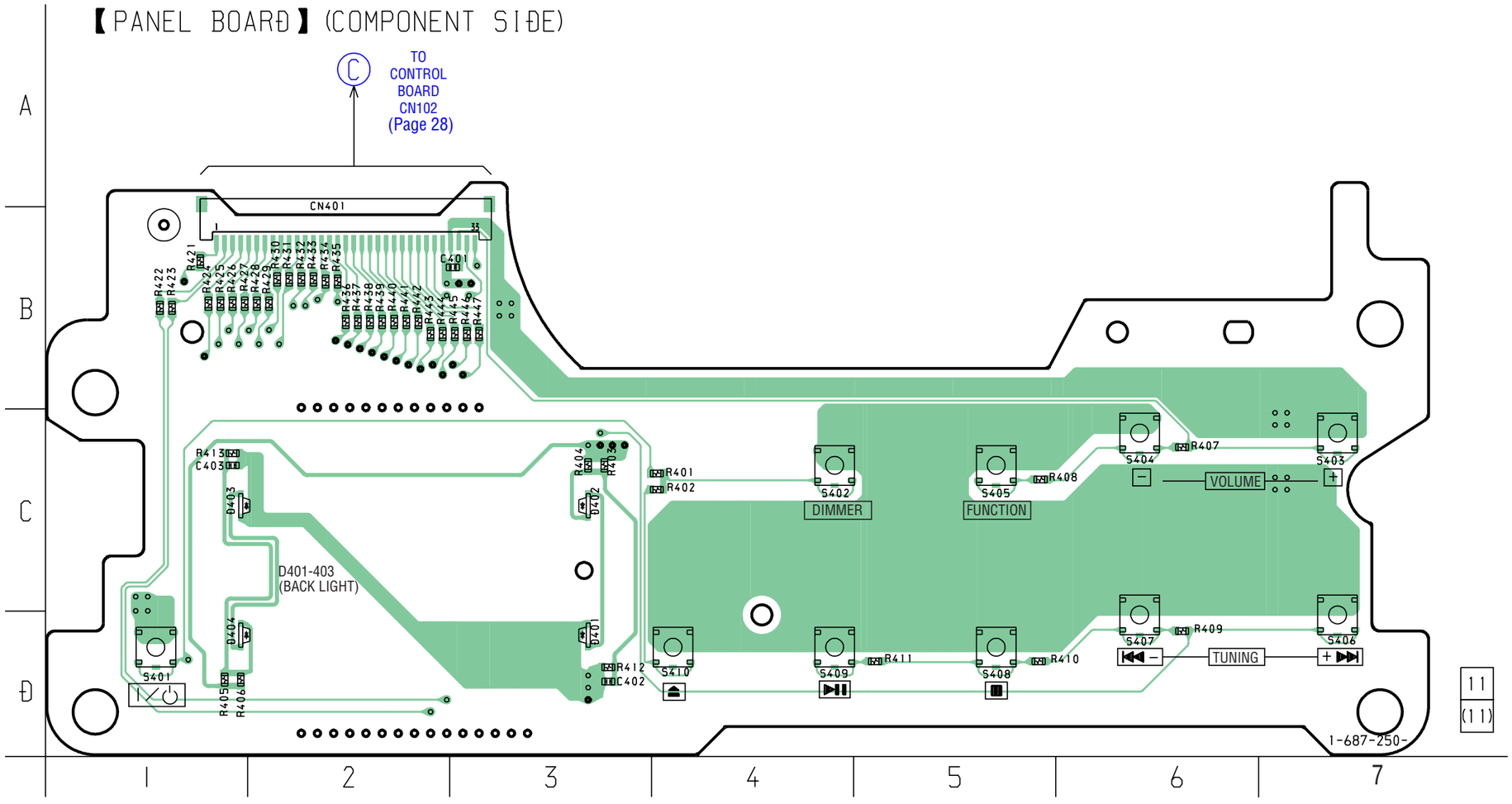
6-4. Printed Wiring Board – BD Section – • See page 21 for Circuit Boards Location.



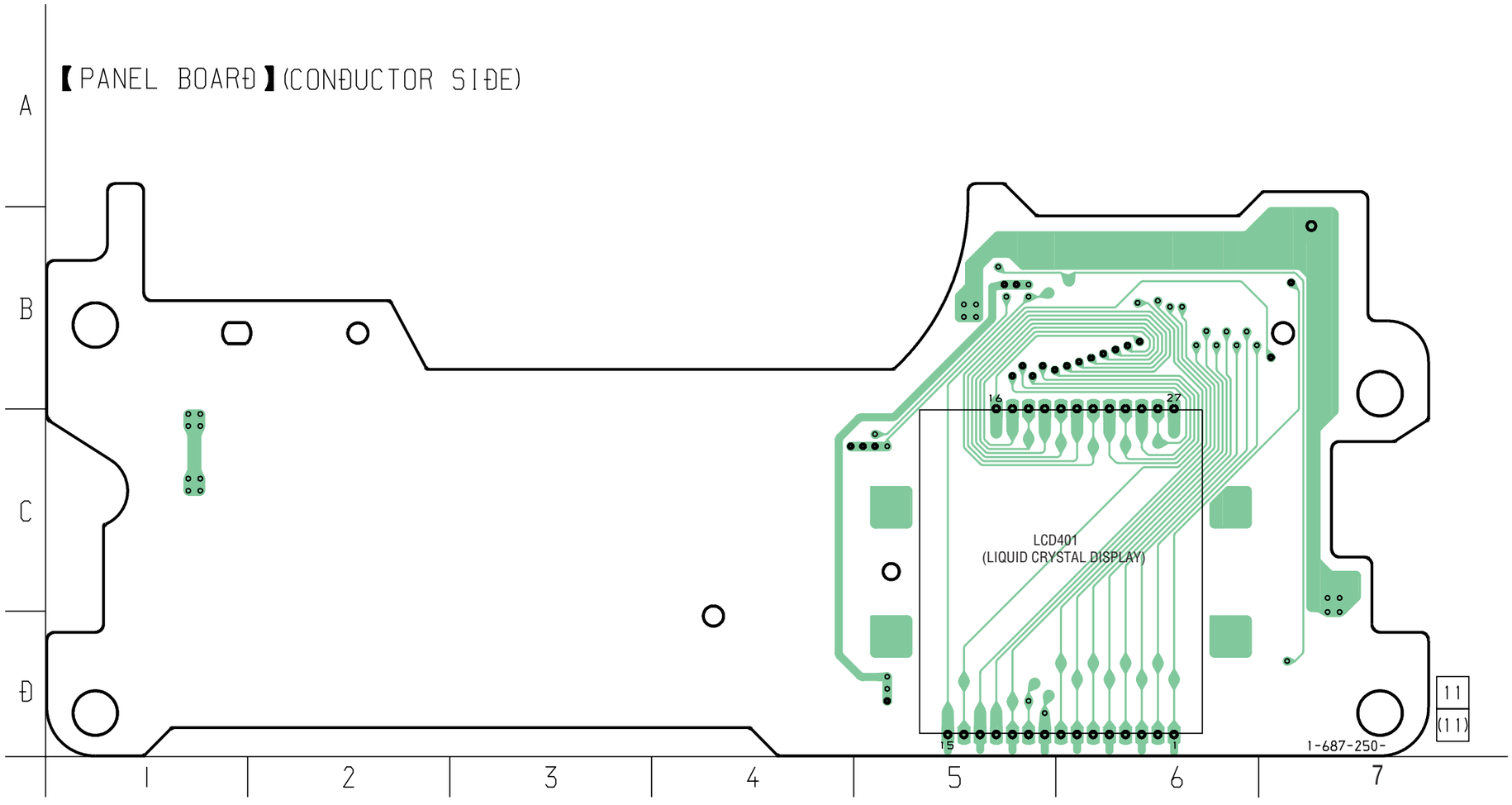
6-5. Schematic Diagram – BD Section – • See page 21 for Wavefoms. • See page 34 for IC Block Diagrams.



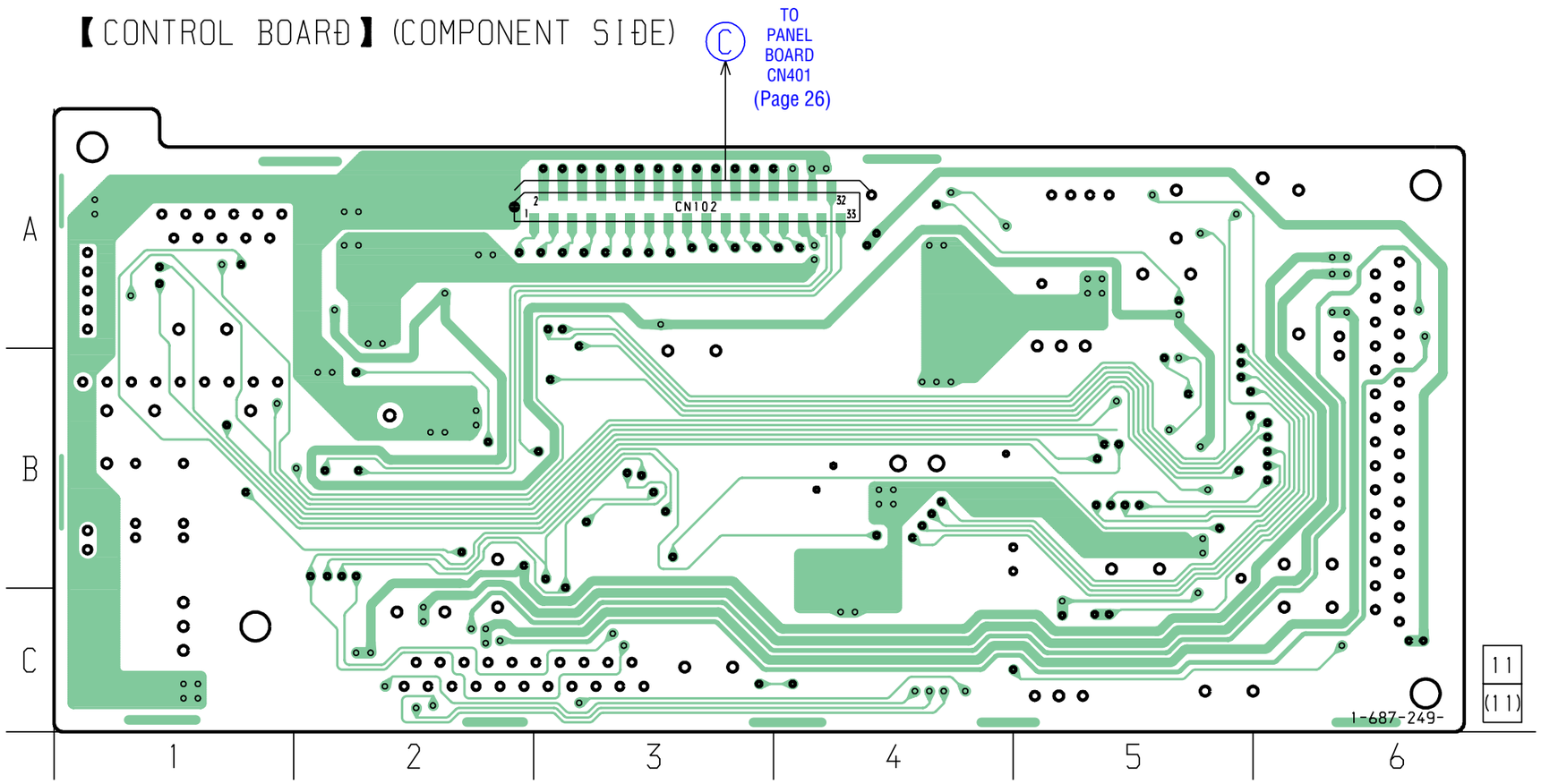
6-6. Printed Wiring Board – PANEL Section (Component Side) – • See page 21 for Circuit Boards Location. • **:** Uses unleaded solder.



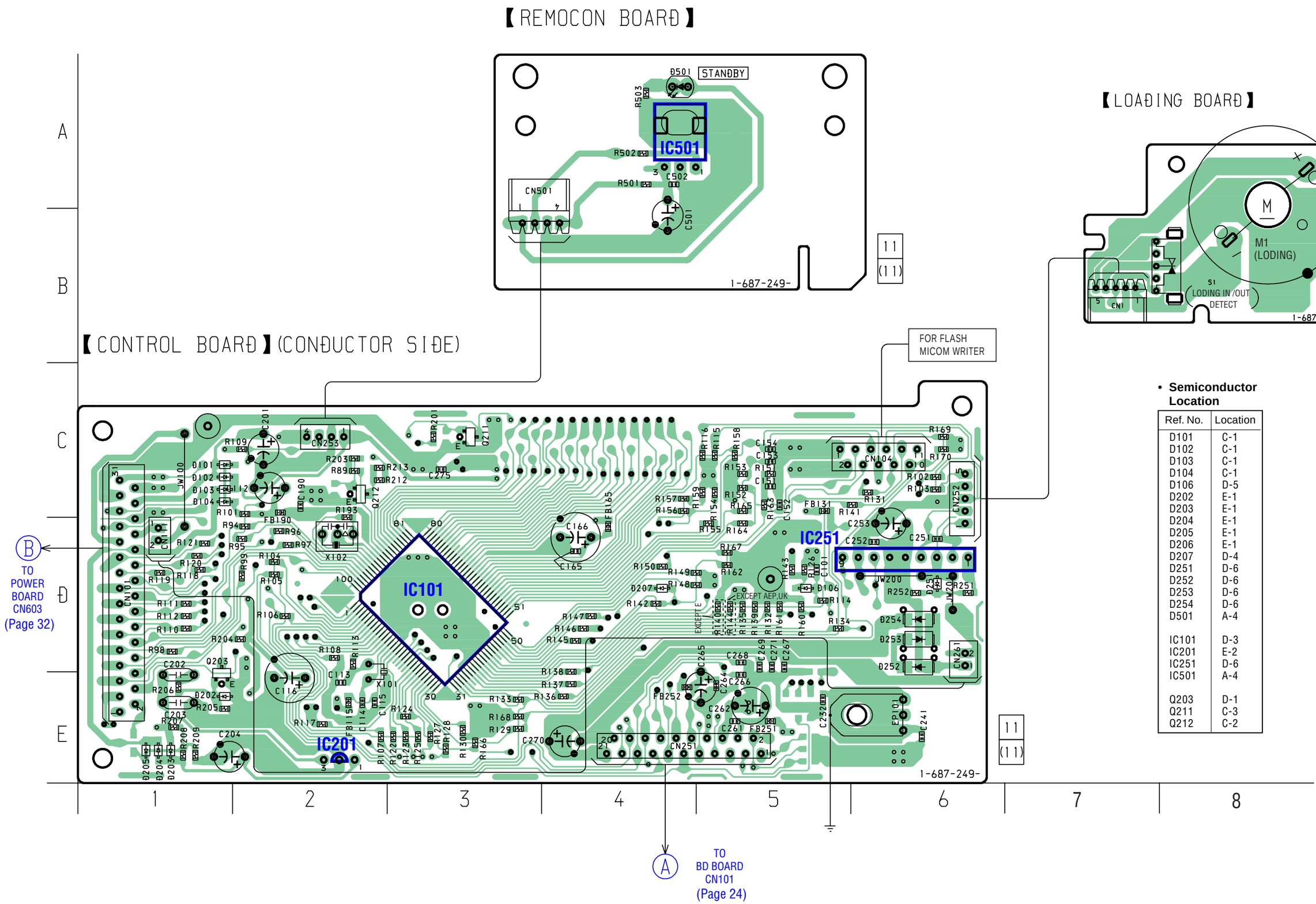
6-7. Printed Wiring Board – PANEL Section (Conductor Side) – • See page 21 for Circuit Boards Location. • **:** Uses unleaded solder.



6-8. Printed Wiring Board – CONTROL Section (Component Side) – • See page 21 for Circuit Boards Location. • **:** Uses unleaded solder.



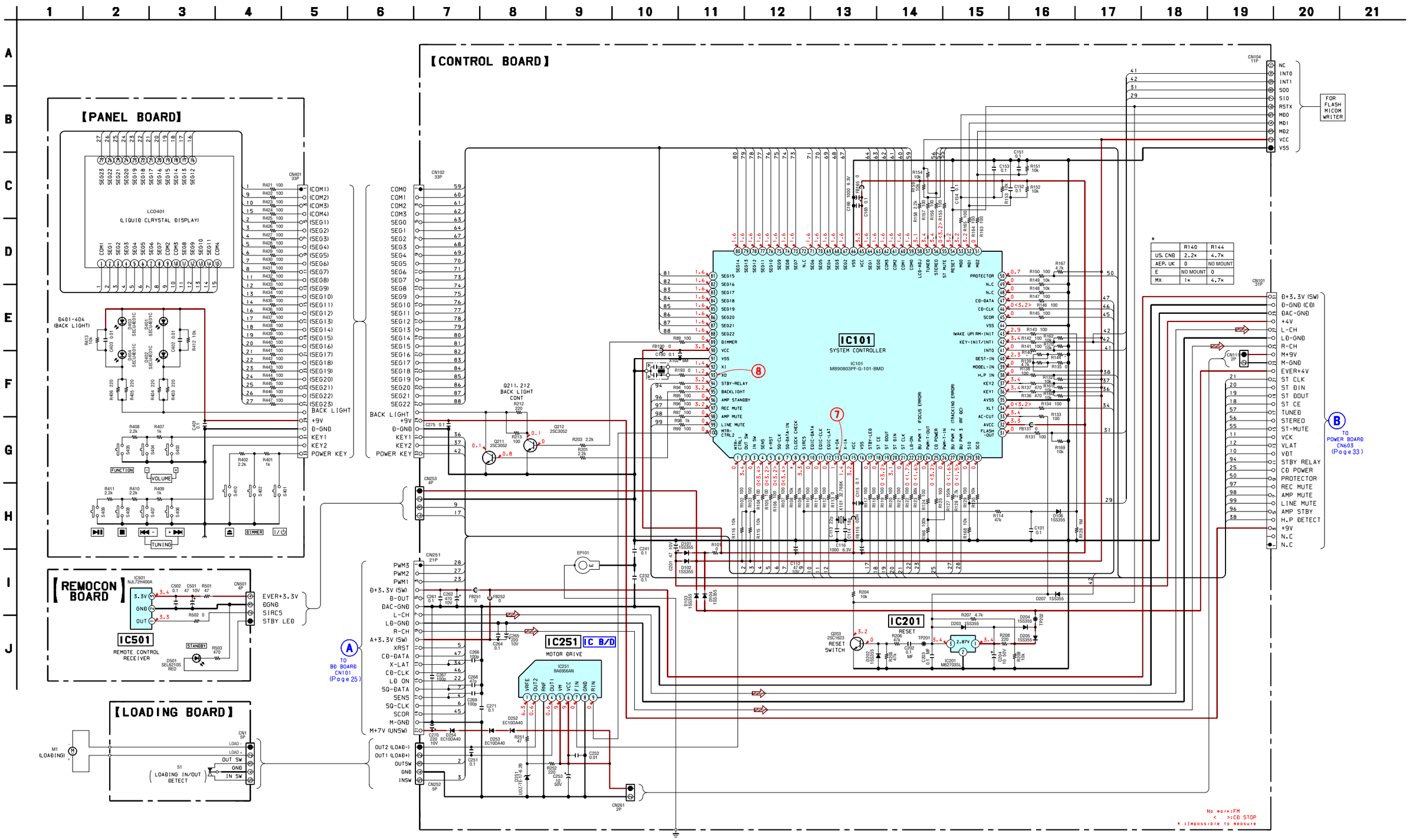
6-9. Printed Wiring Board – CONTROL Section (Conductor Side) – • See page 21 for Circuit Boards Location. • **:** Uses unleaded solder.



- **Semiconductor Location**

Ref. No.	Location
D101	C-1
D102	C-1
D103	C-1
D104	C-1
D106	D-5
D202	E-1
D203	E-1
D204	E-1
D205	E-1
D206	E-1
D207	D-4
D251	D-6
D252	D-6
D253	D-6
D254	D-6
D501	A-4
IC101	D-3
IC201	E-2
IC251	D-6
IC501	A-4
Q203	D-1
Q211	C-3
Q212	C-2

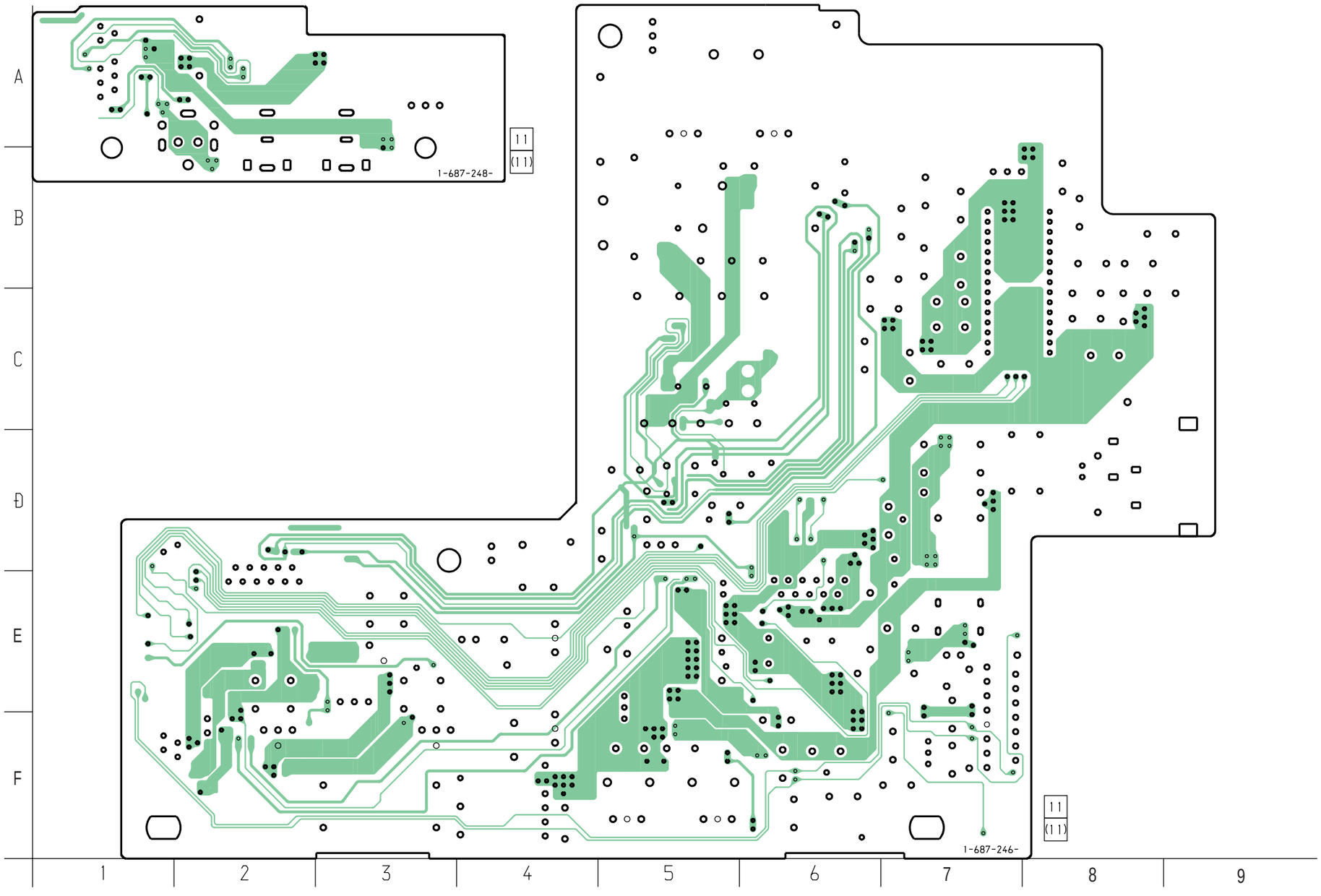
6-10. Schematic Diagram – CONTROL Section – • See page 21 for Wavefoms. • See page 34 for IC Block Diagrams.



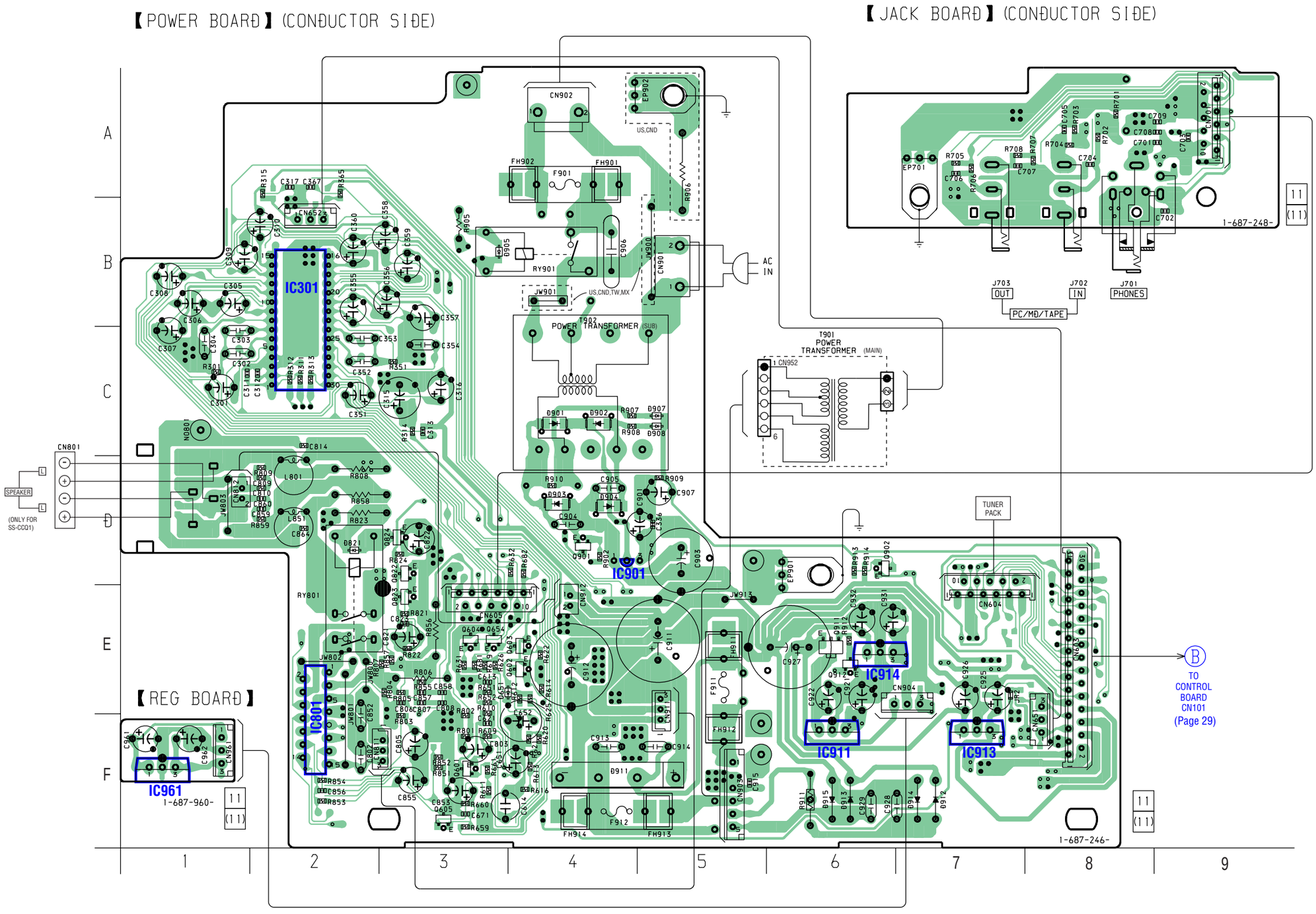
6-11. Printed Wiring Board – POWER Section (Component Side) – • See page 21 for Circuit Boards Location. • **:** Uses unleaded solder.

【JACK BOARD】(COMPONENT SIDE)

【POWER BOARD】(COMPONENT SIDE)



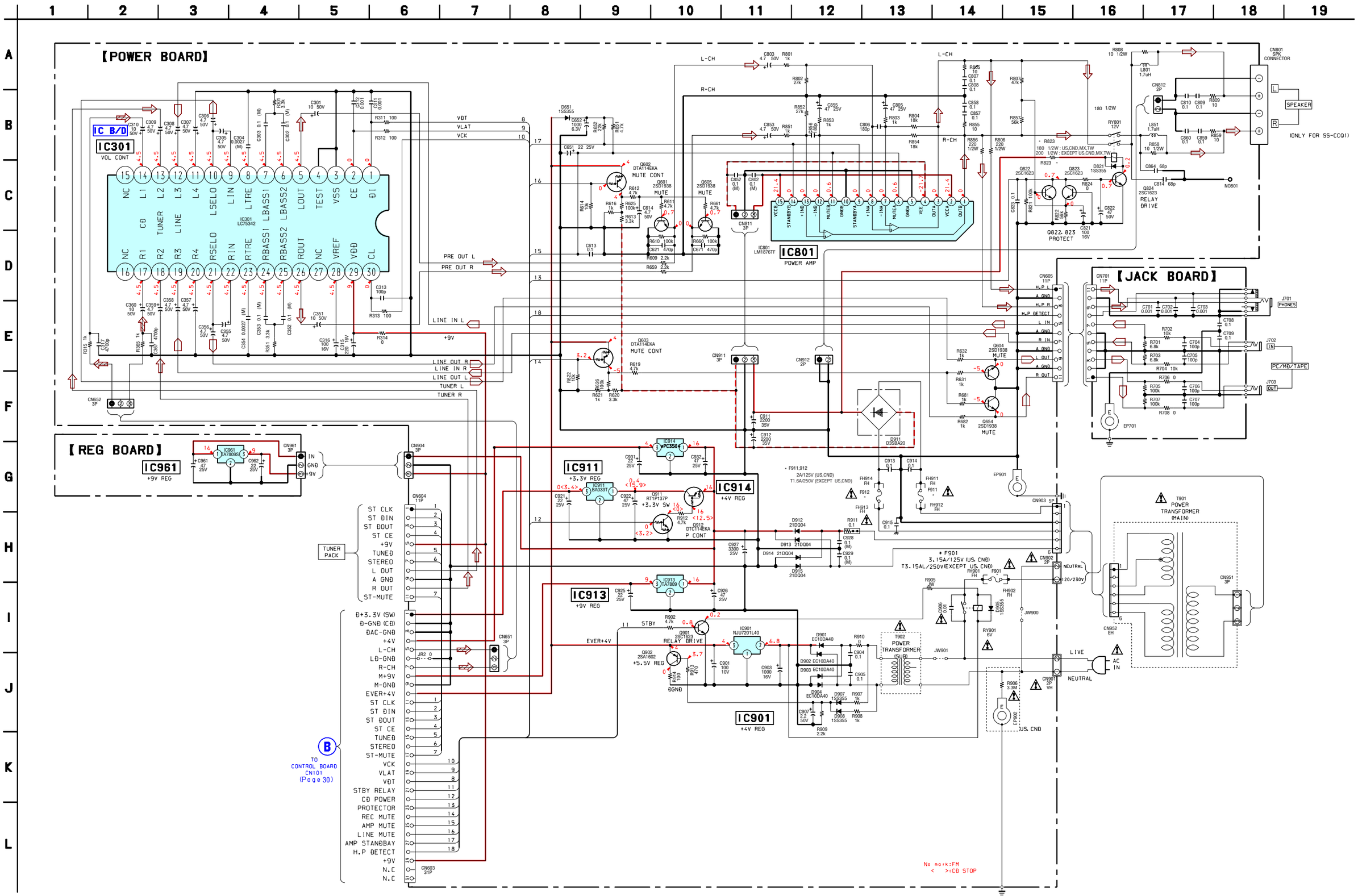
6-12. Printed Wiring Board – POWER Section (Conductor Side) – • See page 21 for Circuit Boards Location. • **:** Uses unleaded solder.



- **Semiconductor Location**

Ref. No.	Location
D651	E-3
D821	D-2
D901	C-4
D902	C-4
D903	D-4
D904	D-4
D905	B-3
D907	C-5
D908	C-5
D911	F-4
D912	F-7
D913	F-6
D914	F-7
D915	F-6
D920	E-7
IC301	B-2
IC801	F-2
IC901	D-4
IC911	F-6
IC913	F-7
IC914	E-6
IC961	F-6
Q601	F-3
Q602	E-4
Q603	E-4
Q604	E-3
Q605	F-3
Q654	E-3
Q822	D-3
Q823	E-3
Q824	D-3
Q901	D-4
Q902	D-6
Q911	E-6
Q912	E-6

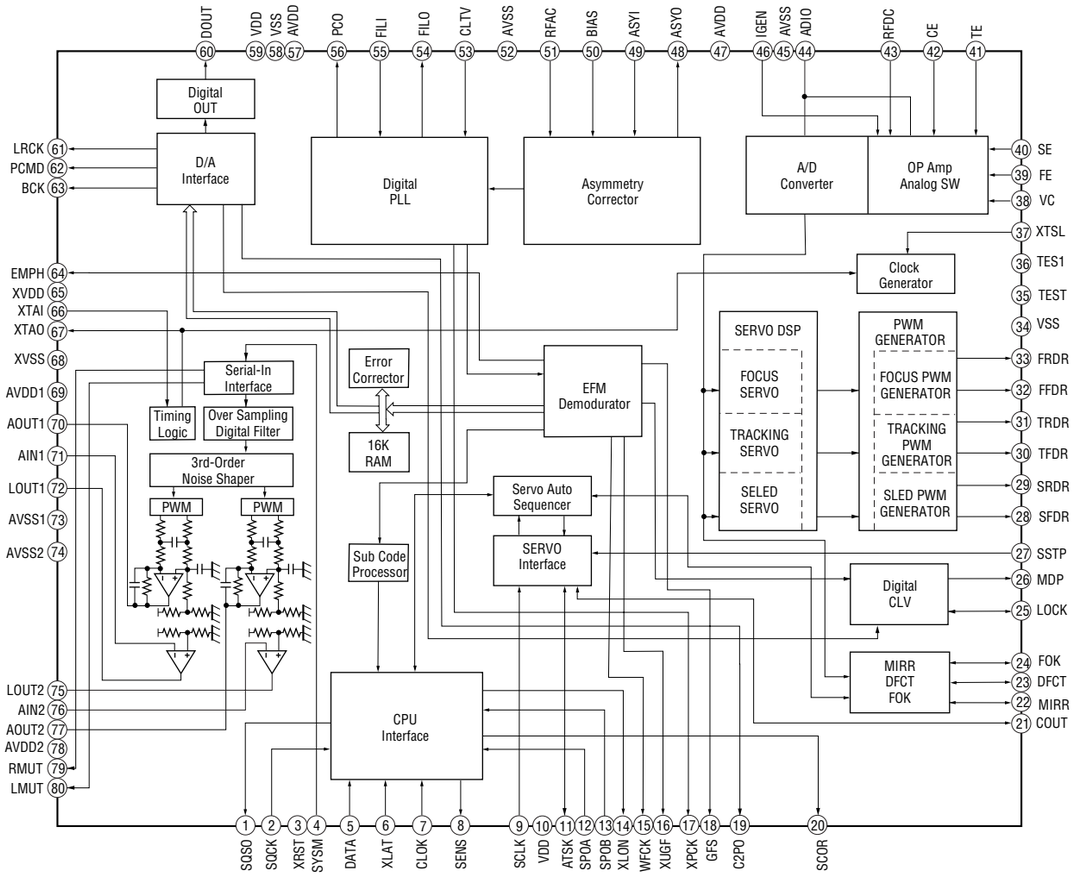
6-13. Schematic Diagram – POWER Section – • See page 34 for IC Block Diagrams.



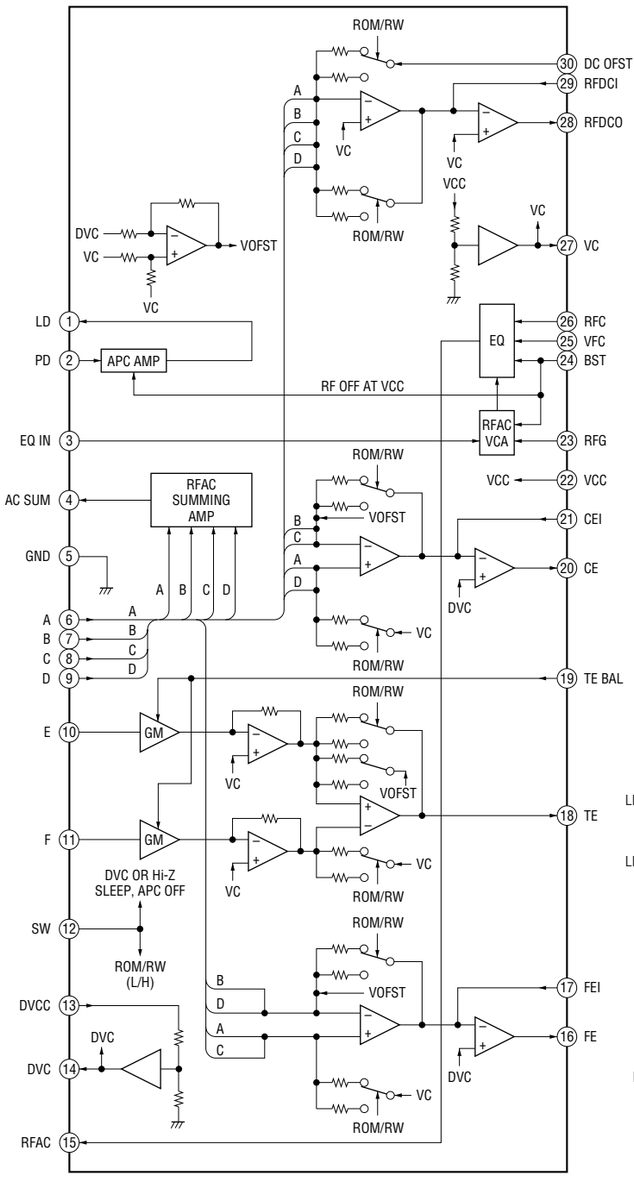
6-14. IC Block Diagrams

– BD Board –

IC101 CXD3017Q

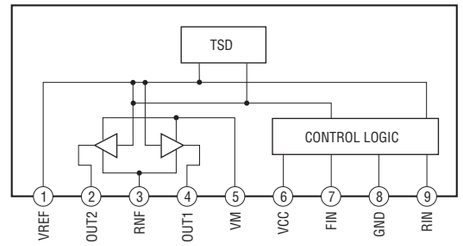


IC103 CXA2647N-T4



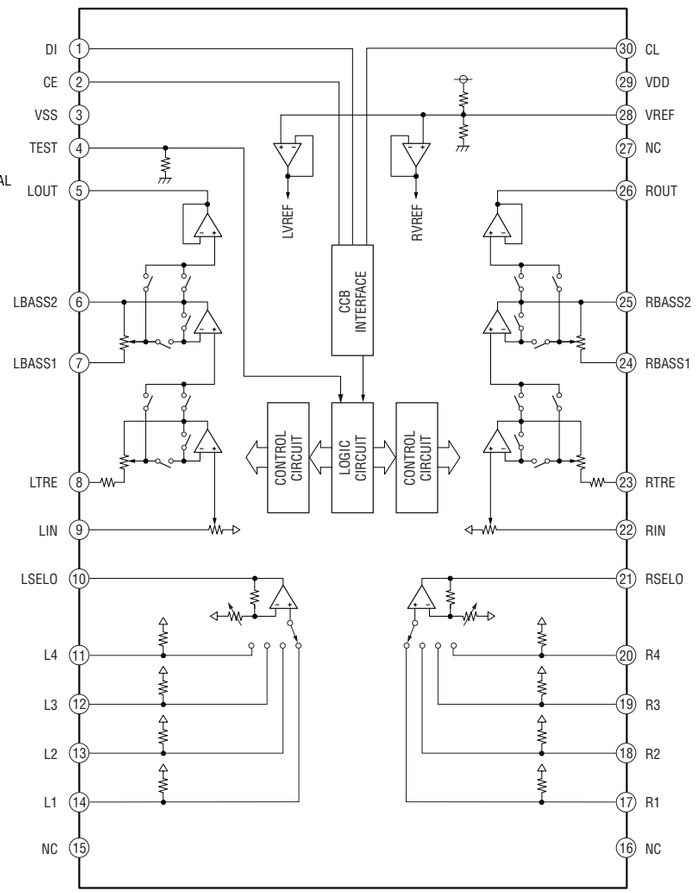
– CONTROL Board –

IC251 BA6956AN



– POWER Board –

IC301 LC75342



6-15. IC Pin Function Description

• IC101 MB90803PF-G-101-BMD (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	MTR-CTRL1	O	Motor control signal output to the motor driver (IC251)
2	OUT SW	I	CD tray detection switch signal input
3	IN SW	I	CD tray detection switch signal input
4	SENS	I	SENS signal input from the DSP
5	X-RST	O	Reset signal output to the DSP and the motor/coil driver
6	SQ-CLK	O	Sub-Q clock output to the DSP
7	SQ-DATA-IN	I	Sub-Q data input from the DSP
8	CLOCK CHECK	O	Clock signal output terminal for check
9	SIRCS	I	Remote sensor signal input from the IC501
10	EQIC-DATA	O	Data output to the volume and tone control (IC301)
11	EQIC-CLK	O	Clock output to the volume and tone control (IC301)
12	EQIC-LAT	O	Latch signal output to the volume and tone control (IC301)
13	X-OA	O	Resonator terminal (32.768kHz)
14	X-IA	I	Resonator terminal (32.768kHz)
15	VCC	—	Power supply terminal
16	VSS	—	Ground terminal
17	STBY-LED	O	Standby LED control signal output
18	ST CE	O	Chip enable signal output to the tuner unit
19	ST DOUT	O	Data output to the tuner unit
20	ST DIN	I	Data input from the tuner unit
21	ST CLK	O	Clock output to the tuner unit
22	LD-ON	O	Laser diode control signal output
23	BU PWM 1	O	Focus servo drive PWM signal output to the RF amplifier
24	PWM-T-OUT	O	PWM-T signal output terminal
25	CD POWER	O	Power supply on/off control signal output to the CD section
26	PWM-T-IN	I	PWM-T signal input terminal
27	BU PWM 2	O	PWM signal output to the RF amplifier
28	BU PWM 3	O	RFDC PWM signal output to the RF amplifier
29	SI0	I	Communication data input terminal (for flash programming)
30	SC0	—	Clock terminal (not used)
31	FLASH-OUT	O	Communication data output terminal (for flash programming)
32	AVCC	—	Power supply (A/D converter)
33	AC-CUT	I	AC off detection signal input from the reset signal generator
34	XLT	O	Serial data latch signal output to the DSP
35	AVSS	—	Ground terminal (A/D converter)
36	KEY1	I	Key input terminal (A/D input)
37	KEY2	I	Key input terminal (A/D input)
38	H.P IN	I	Headphone jack detection signal input
39	MODEL-IN	I	Model setting terminal
40	DEST-IN	I	Destination setting terminal
41	INT0	I	Interrupt signal input (for flash programming)
42	KEY-INT/INT1	I	Interrupt signal input by pressing a key
43	RM-INT	I	Interrupt signal input by remote control signal
44	VSS	—	Ground terminal
45	SCOR	I	Subcode sync(S0+S1) detection signal input from the DSP
46	CD-CLK	O	Serial data transfer clock output to the DSP
47	CD-DATA	O	Serial data output to the DSP
48, 49	NC	O	Not used
50	PROTECTOR	O	Protection signal output to the speaker relay circuit
51 to 53	MD2 to MD0	I	Operation mode setting input terminal

Pin No.	Pin Name	I/O	Description
54	RESET	I	System reset signal input from the reset signal generator
55	ST MUTE	O	Tuner muting signal output
56	STEREO	I	FM stereo detection signal input
57	TUNED	I	Tuner tuned status signal input
58	LCD-ADJ	—	LCD_ADJ terminal
59 to 62	COM0 to COM3	O	Common signal output to the liquid crystal display
63, 64	SEG0, SEG1	O	Segment signal output to the liquid crystal display
65	VCC	—	Power supply terminal
66	VSS	—	Ground terminal
67 to 71	SEG2 to SEG6	O	Segment signal output to the liquid crystal display
72	NC	—	Not used
73 to 88	SEG7 to SEG22	O	Segment signal output to the liquid crystal display
89	DIMMER	O	Dimmer signal output to the backlight control circuit
90	VCC	—	Power supply terminal
91	VSS	—	Ground terminal
92	XI	I	Resonator terminal (6MHz)
93	XO	O	Resonator terminal (6MHz)
94	STBY-RELAY	O	Main system power supply control signal output
95	BACKLIGHT	O	Backlight control signal output
96	AMP STANDBY	O	Standby signal output to the power amplifier
97	REC MUTE	O	Line out muting signal output
98	AMP MUTE	O	Muting signal output to the power amplifier
99	LINE MUTE	O	Pre-amplifier output muting control signal output
100	MTR-CTRL2	O	Motor control signal output to the motor driver (IC251)

SECTION 7
EXPLODED VIEWS

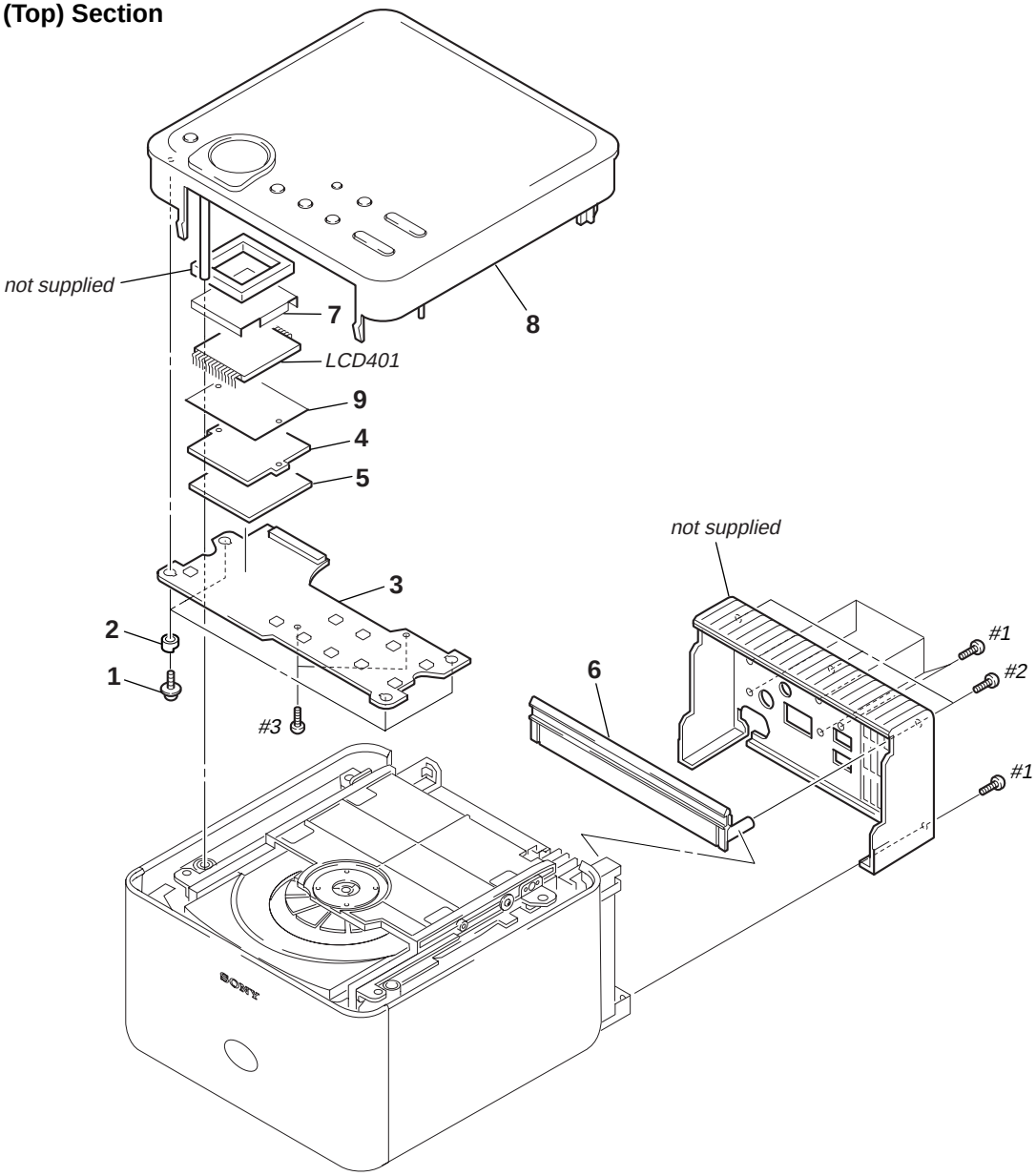
NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- The mechanical parts with no reference number in the exploded views are not supplied.
- Abbreviation
  AUS : Australian model.
  CND: Canadian model.
  HK : Hong Kong model.
  KR : Korea model.
  MX : Mexican model.
  SP : Singapore model.
  TW : Taiwan model.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

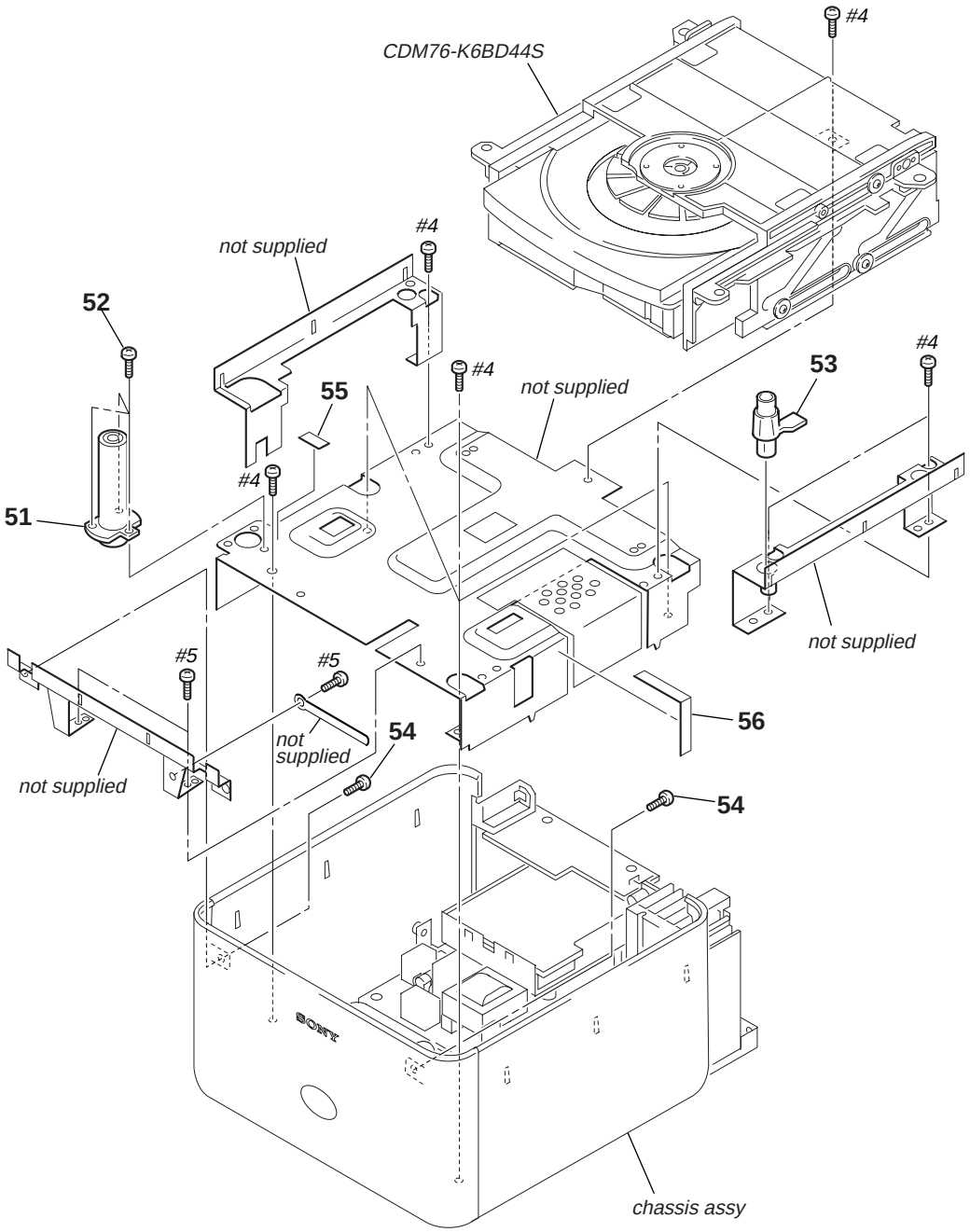
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

7-1. Panel (Top) Section



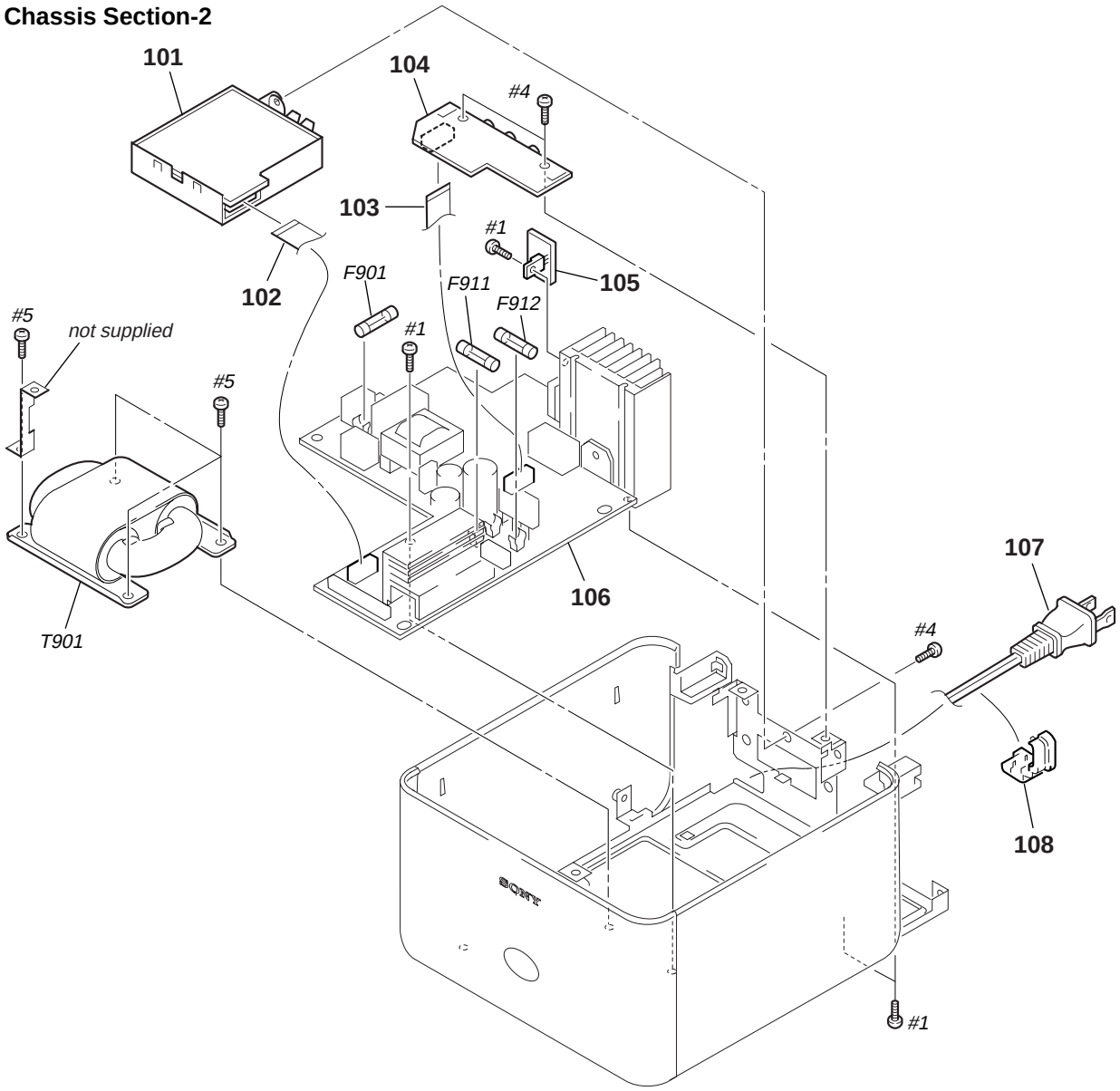
Ref. No.	Part No.	Description	Remarks
1	4-933-134-01	SCREW (M2.6), +PTPWH	
2	4-244-737-01	BUSHING (PWB)	
3	1-687-250-11	PANEL BOARD	
4	4-244-735-01	PLATE, LIGHT GUIDE	
5	4-246-812-01	SHEET, REFLECTION	
6	4-244-740-01	PANEL (BACK) TOP (FOR WHITE)(US,CND)	
6	4-244-740-11	PANEL (BACK) TOP (FOR WHITE) (EXCEPT UC,CND)	
6	4-244-740-21	PANEL (BACK) TOP (FOR BLACK)(US,CND)	
7	4-245-495-01	SHEET (HOLOGRAM)	
8	X-4955-304-1	PANEL (TOP) ASSY (WHITE)(US,CND)	
8	X-4955-533-1	PANEL (TOP) ASSY (WHITE)(EXCEPT UC,CND)	
8	X-4955-643-1	PANEL (TOP) ASSY (BLACK)(US,CND)	
9	4-244-736-01	SHEET (LCD)	
LCD401	1-805-197-11	DISPLAY PANEL, LIQUID CRYSTAL	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#2	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3	
#3	7-685-102-19	SCREW (+BTP)(2X4)	

7-2. Chassis Section-1



Ref. No.	Part No.	Description	Remarks
51	X-4955-635-1	BEARING ASSY	
52	4-218-253-21	SCREW (M2.6), +BTTP	
53	4-244-753-01	BUSHING (GUIDE A)	
54	4-951-620-01	SCREW (2.6X8), +BVTP	
55	3-559-407-01	CUSHION, STOPPER	
56	3-378-109-12	CUSHION, SARANET	
#4	7-685-646-71	SCREW +BVTP 3X8 TYPE2 IT-3	
#5	7-685-871-01	SCREW +BVTT 3X6 (S)	

7-3. Chassis Section-2

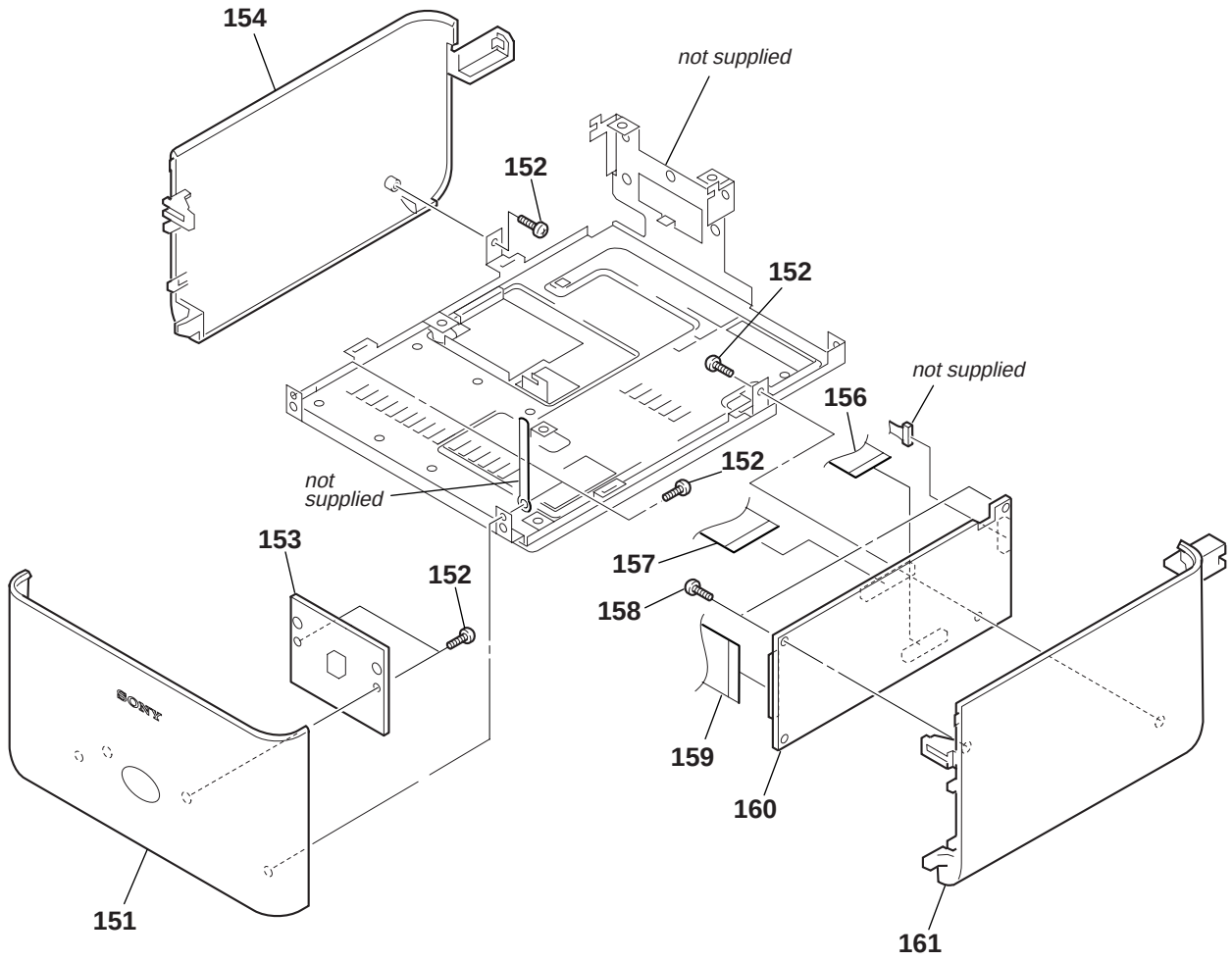


Ref. No.	Part No.	Description	Remarks
101	1-693-603-31	TUNER (FM/AM)(HK,SP,TW,MX,AUS)	
101	1-693-605-11	TUNER (FM/AM)(AEP,UK,KR)	
101	1-693-623-11	TUNER (FM/AM)(FOR BLACK)(US,CND)	
101	1-693-623-31	TUNER (FM/AM)(FOR WHITE)(US,CND)	
102	1-765-324-11	FFC 11P	
103	1-765-324-11	FFC 11P	
104	A-4731-461-A	JACK BOARD, COMPLETE	
105	A-4732-629-A	REG BOARD, COMPLETE	
106	A-4731-453-A	POWER BOARD, COMPLETE (US,CND)	
106	A-4731-467-A	POWER BOARD, COMPLETE (AEP,UK)	
106	A-4731-472-A	POWER BOARD, COMPLETE (SP)	
106	A-4731-477-A	POWER BOARD, COMPLETE (HK)	
106	A-4731-482-A	POWER BOARD, COMPLETE (AUS)	
106	A-4731-487-A	POWER BOARD, COMPLETE (TW)	
106	A-4731-492-A	POWER BOARD, COMPLETE (KR)	
106	A-4731-497-A	POWER BOARD, COMPLETE (MX)	
⚠107	1-769-079-22	CORD, POWER (KR)	
⚠107	1-775-790-11	CORD, POWER (AUS)	
⚠107	1-777-071-83	CORD, POWER (AEP,UK,HK,SP,TW)	
⚠107	1-783-531-11	CORD, POWER (US,CND)	
⚠107	1-827-226-11	CORD, POWER (MX)	

Ref. No.	Part No.	Description	Remarks
* 108	3-703-244-00	BUSHING (2104), CORD	
⚠F901	1-533-451-11	FUSE, GLASS TUBE (DIA. 5)(3.15A 125V)	(US,CND)
⚠F901	1-533-470-11	FUSE, GLASS TUBE (DIA. 5)(T3.15AL 250V)	(EXCEPT UC,CND)
⚠F911	1-533-449-11	FUSE, GLASS TUBE (DIA. 5)(2.0A 125V)(UC,CND)	
⚠F911	1-533-467-11	FUSE, GLASS TUBE (T1.6A 250V)	(EXCEPT US,CND)
⚠F912	1-533-449-11	FUSE, GLASS TUBE (DIA. 5)(2.0A 125V)(UC,CND)	
⚠F912	1-533-467-11	FUSE, GLASS TUBE (T1.6A 250V)	(EXCEPT US,CND)
⚠T901	1-439-715-11	TRANSFORMER, POWER (US,CND,TW,MX)	
⚠T901	1-439-716-11	TRANSFORMER, POWER (AEP,UK,SP,AUS)	
⚠T901	1-439-717-11	TRANSFORMER, POWER (HK,KR)	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#4	7-685-646-71	SCREW +BVTP 3X8 TYPE2 IT-3	
#5	7-685-871-01	SCREW +BVTT 3X6 (S)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

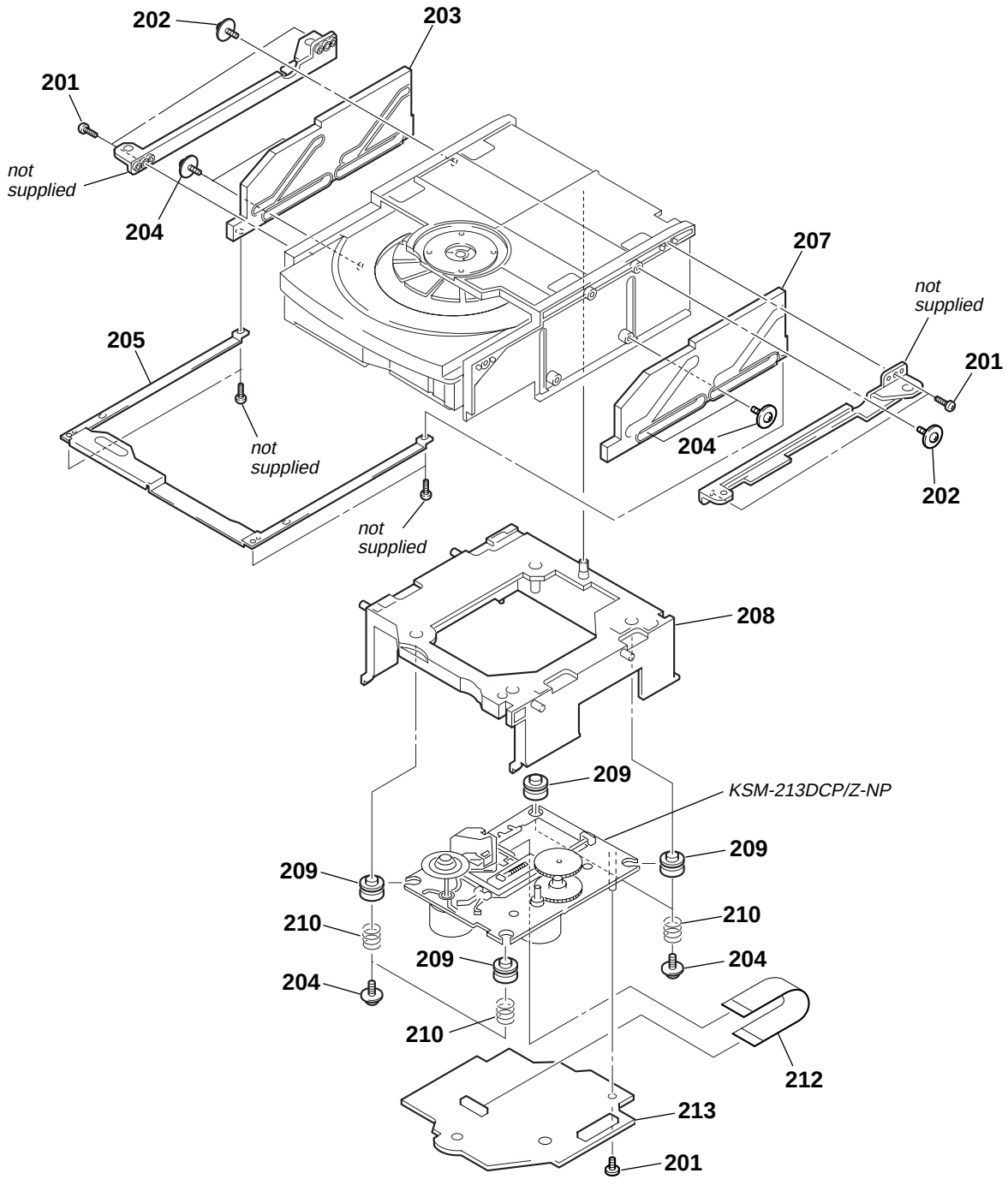
7-4. Chassis Section-3



Ref. No.	Part No.	Description	Remarks
151	X-4955-305-1	PANEL (FRONT) ASSY (WHITE)(US,CND)	
151	X-4955-534-1	PANEL (FRONT) ASSY (WHITE)	(EXCEPT UC,CND)
151	X-4955-644-1	PANEL (FRONT) ASSY (BLACK)(US,CND)	
152	4-951-620-01	SCREW (2.6X8), +BVTP	
153	A-4731-459-A	REMOCON BOARD, COMPLETE	
154	4-244-741-01	PANEL (SIDE-L)(WHITE)(US,CND)	
154	4-244-741-11	PANEL (SIDE-L)(WHITE)(EXCEPT UC,CND)	
154	4-244-741-21	PANEL (SIDE-L)(BLACK)(US,CND)	
156	1-827-558-11	FFC 21P (150)	
157	1-827-559-11	FFC 33P (425)	
158	4-218-253-21	SCREW (M2.6), +BTTP	

Ref. No.	Part No.	Description	Remarks
159	1-773-320-11	FFC 31P (150)	
160	A-4731-456-A	CONTROL BOARD, COMPLETE (US,CND)	
160	A-4731-469-A	CONTROL BOARD, COMPLETE (AEP,UK)	
160	A-4731-474-A	CONTROL BOARD, COMPLETE (SP)	
160	A-4731-479-A	CONTROL BOARD, COMPLETE (HK)	
160	A-4731-484-A	CONTROL BOARD, COMPLETE (AUS)	
160	A-4731-489-A	CONTROL BOARD, COMPLETE (TW)	
160	A-4731-494-A	CONTROL BOARD, COMPLETE (KR)	
160	A-4731-499-A	CONTROL BOARD, COMPLETE (MX)	
161	4-244-742-01	PANEL (SIDE-R)(WHITE)(US,CND)	
161	4-244-742-11	PANEL (SIDE-R)(WHITE)(EXCEPT UC,CND)	
161	4-244-742-21	PANEL (SIDE-R)(BLACK)(US,CND)	

7-5. CD Mechanism Deck Section-1 (CDM76-K6BD44S)

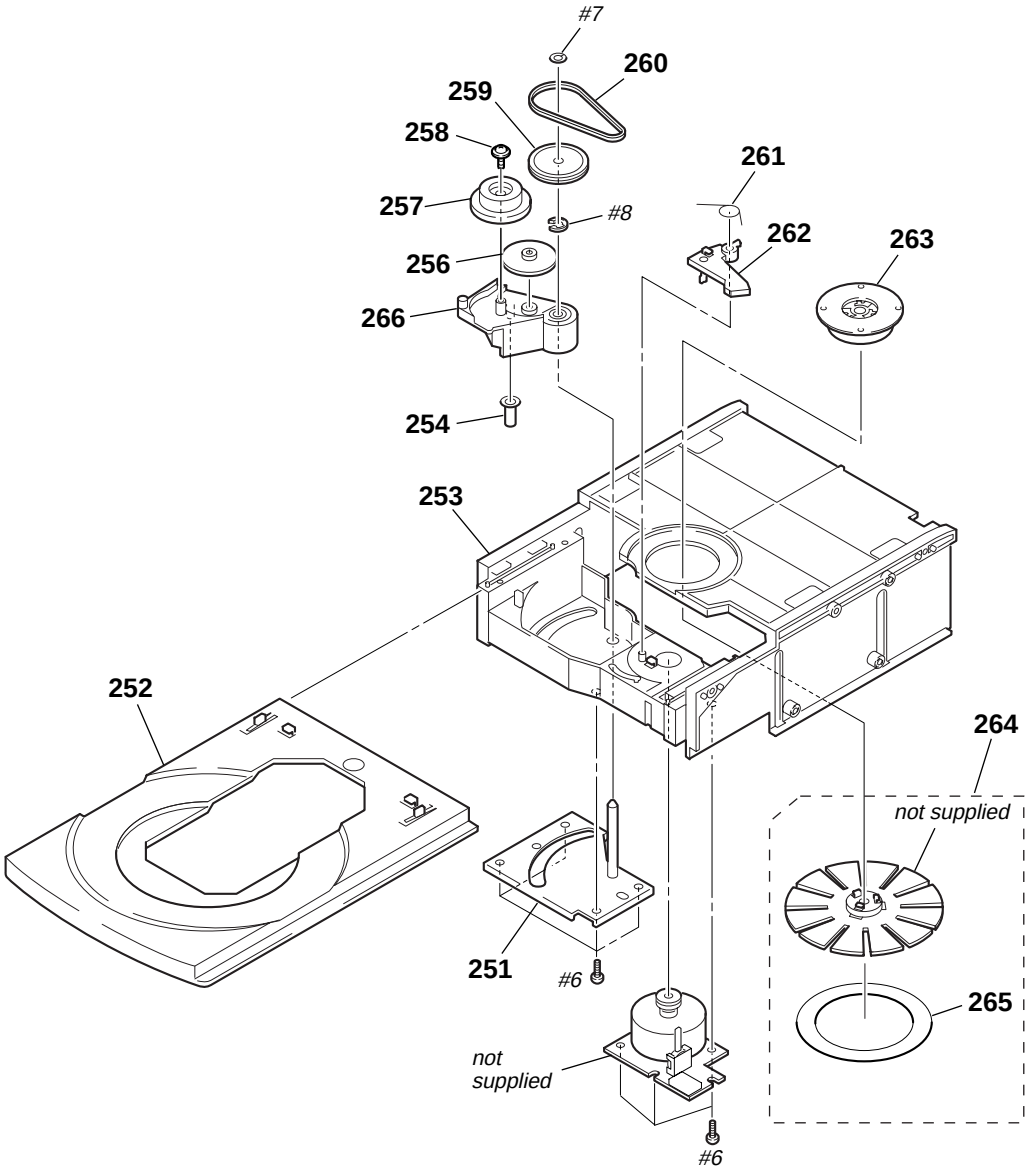


Ref. No.	Part No.	Description	Remarks
201	4-951-620-01	SCREW (2.6X8), +BVTP	
202	4-218-252-11	SCREW (+PTPWH M2.6), FLOATING	
203	4-244-245-01	SLIDER (L)	
204	4-227-899-01	SCREW (DIA. 12), FROATING	
205	4-244-240-02	SLIDER (S)	
207	4-244-246-01	SLIDER (R)	

Ref. No.	Part No.	Description	Remarks
208	X-4955-579-2	MD BASE	
209	4-227-549-11	INSULATOR	
210	4-227-045-11	SPRING (INSULATOR), COIL	
212	1-792-024-11	WIRE (FLAT TYPE)(16 CORE)	
213	A-4731-164-A	BD BOARD, COMPLETE	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

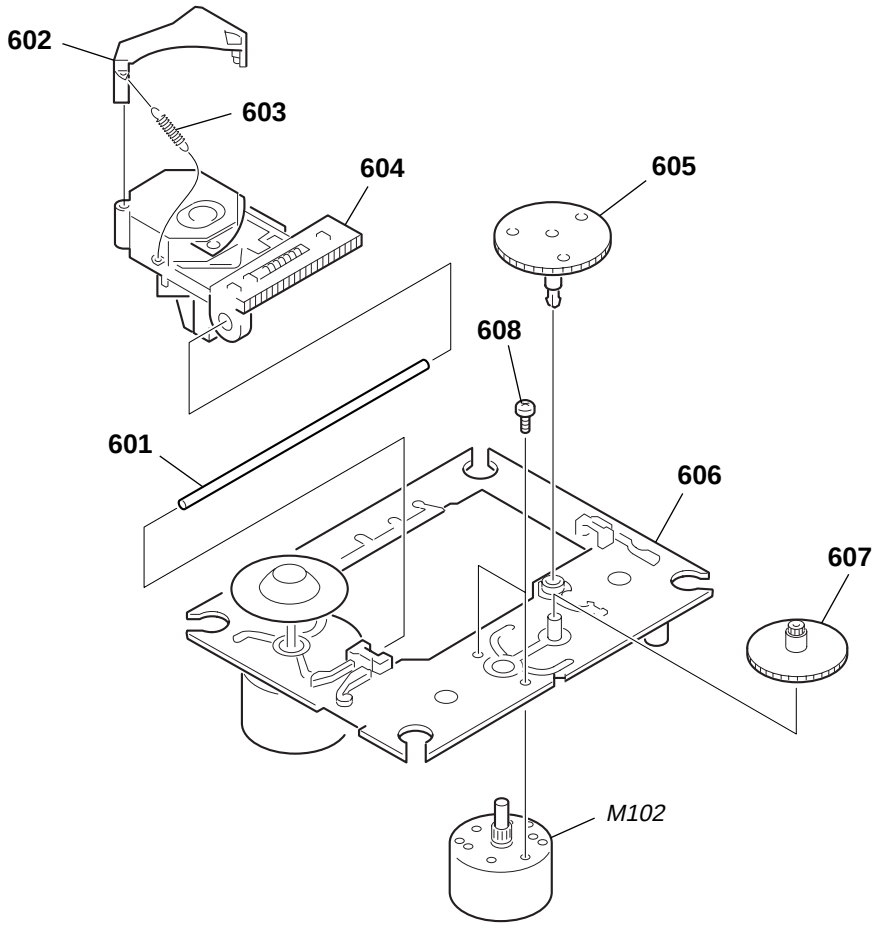
7-6. CD Mechanism Deck Section-2
(CDM76-K6BD44S)



Ref. No.	Part No.	Description	Remarks
251	X-4955-351-2	BRACKET ASSY	
252	4-244-243-01	TRAY	
253	4-244-242-01	CHASSIS (CDM)	
254	4-244-821-01	COLLAR	
255	X-4955-351-1	BRACKET ASSY	
256	4-244-251-01	GEAR (M)	
257	4-244-252-02	GEAR (P)	
258	4-992-069-01	SCREW (+PTPWH)(M2)(DIA. 7)	
259	4-244-253-01	PULLEY (LDG)	
260	4-221-816-11	BELT (CDM55)	

Ref. No.	Part No.	Description	Remarks
261	4-244-249-01	SPRING, TORSION	
262	4-244-248-01	LEVER (SW)	
263	1-452-925-21	MAGNET ASSY	
264	X-4953-195-3	PULLEY (AT) ASSY	
265	4-231-777-02	SHEET (KH2)	
266	4-244-241-03	LEVER (U/D)	
#6	7-685-134-19	SCREW +P 2.6X8 TYPE2 NON-SLIT	
#7	7-624-104-04	STOP RING 2.0, TYPE-E	
#8	7-624-106-04	STOP RING 3.0, TYPE-E	

7-7. KSM-213DCP/Z-NP



Ref. No.	Part No.	Description	Remarks
601	2-626-908-02	SHAFT, SLED	
602	2-646-697-03	SHUTTER (F), LENS	
603	2-646-702-02	SPRING, EXTENSION	
⚠604	8-820-020-02	OPTCAL PICK-UP (KSS-213D/Q-RP)	
605	2-626-907-02	GEAR (A)	
606	X-2161-802-1	CHASSIS ASSY (DCP), TT	
607	2-627-003-01	GEAR (B) (RP)	
608	3-713-786-51	SCREW +P 2X3	
M102	X-2625-769-1	GEAR ASSY (MB) (RP), MOTOR (SLED)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

BD

SECTION 8
ELECTRICAL PARTS LIST

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS:
  uF: µF
- COILS
  uH: µH
- RESISTORS
  All resistors are in ohms.
  METAL: metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA...: µA... , uPA... , µPA... ,
  uPB... , µPB... , uPC... , µPC... ,
  uPD..., µPD...
- Abbreviation
  AUS : Australian model.
  CND: Canadian model.
  HK : Hong Kong model.
  KR : Korea model.
  MX : Mexican model.
  SP : Singapore model.
  TW : Taiwan model.

When indicating parts by reference number, please include the board name.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remarks
	A-4731-164-A	BD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C102	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C103	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C104	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C108	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C109	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C110	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C111	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C112	1-115-156-11	CERAMIC CHIP	1uF		10V
C114	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C116	1-126-382-11	ELECT	100uF	20.00%	16V
C117	1-126-382-11	ELECT	100uF	20.00%	16V
C118	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C121	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C122	1-104-665-11	ELECT	100uF	20.00%	16V
C123	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C124	1-125-891-11	CERAMIC CHIP	0.47uF	10.00%	10V
C125	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C126	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C127	1-126-382-11	ELECT	100uF	20.00%	16V
C130	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C131	1-104-665-11	ELECT	100uF	20.00%	16V
C133	1-162-921-11	ERAMIC CHIP	33PF	5%	50V
C140	1-115-156-11	CERAMIC CHIP	1uF		10V
C143	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C145	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C146	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C150	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C153	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C159	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
C162	1-126-382-11	ELECT	100uF	20.00%	16V
C163	1-104-665-11	ELECT	100uF	20.00%	16V
C165	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C167	1-162-920-11	ERAMIC CHIP	27PF	5%	50V
C168	1-162-975-11	CERAMIC CHIP	24PF	5.00%	50V
C171	1-115-412-11	CERAMIC CHIP	680PF	5.00%	25V
C172	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C181	1-115-412-11	CERAMIC CHIP	680PF	5.00%	25V
C182	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C183	1-110-563-11	CERAMIC CHIP	0.068uF	10.00%	16V
C184	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C185	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C191	1-104-665-11	ELECT	100uF	20.00%	16V
C192	1-126-382-11	ELECT	100uF	20.00%	16V
C193	1-126-382-11	ELECT	100uF	20.00%	16V
C194	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C196	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C197	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C198	1-104-665-11	ELECT	100uF	20.00%	16V
		< CONNECTOR >			
CN101	1-569-914-11	SOCKET, CONNECTOR 21P			
CN102	1-793-907-11	CONNECTOR, FFC/FPC 16P			
		< RESISTOR >			
FB101	1-216-864-11	METAL CHIP	0	5%	1/16W
FB103	1-216-864-11	METAL CHIP	0	5%	1/16W
		< IC >			
IC101	8-752-402-31	IC CXD3017Q			
IC102	8-759-677-90	IC BA5947FP-E2			
IC103	8-752-106-21	IC CXA2647N-T4			
		< RESISTOR >			
JR101	1-216-864-11	METAL CHIP	0	5%	1/16W
		< TRANSISTOR >			
Q101	8-729-046-90	TRANSISTOR 2SB970- (TX) .S0			
		< RESISTOR >			
R101	1-216-821-11	METAL CHIP	1K	5%	1/16W
R102	1-216-845-11	METAL CHIP	100K	5%	1/16W
R103	1-216-835-11	METAL CHIP	15K	5%	1/16W
R104	1-216-839-11	METAL CHIP	33K	5%	1/16W
R106	1-216-821-11	METAL CHIP	1K	5%	1/16W
R107	1-216-833-11	METAL CHIP	10K	5%	1/16W
R108	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R109	1-216-857-11	METAL CHIP	1M	5%	1/16W
R111	1-216-846-11	METAL CHIP	120K	5%	1/16W
R114	1-216-852-11	METAL CHIP	390K	5%	1/16W
R116	1-216-797-11	METAL CHIP	10	5%	1/16W
R117	1-216-821-11	METAL CHIP	1K	5%	1/16W
R118	1-216-809-11	METAL CHIP	100	5%	1/16W
R119	1-216-824-11	METAL CHIP	1.8K	5%	1/16W

Ref. No.	Part No.	Description			Remarks
R120	1-216-835-11	METAL CHIP	15K	5%	1/16W
R122	1-216-845-11	METAL CHIP	100K	5%	1/16W
R123	1-216-833-11	METAL CHIP	10K	5%	1/16W
R124	1-216-845-11	METAL CHIP	100K	5%	1/16W
R131	1-216-813-11	METAL CHIP	220	5%	1/16W
R143	1-216-836-11	METAL CHIP	18K	5%	1/16W
R144	1-216-836-11	METAL CHIP	18K	5%	1/16W
R147	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R148	1-216-791-11	METAL CHIP	3.3	5%	1/16W
R150	1-216-833-11	METAL CHIP	10K	5%	1/16W
R151	1-216-846-11	METAL CHIP	120K	5%	1/16W
R158	1-216-837-11	METAL CHIP	22K	5%	1/16W
R159	1-216-837-11	METAL CHIP	22K	5%	1/16W
R162	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R171	1-216-837-11	METAL CHIP	22K	5%	1/16W
R172	1-216-837-11	METAL CHIP	22K	5%	1/16W
R173	1-216-837-11	METAL CHIP	22K	5%	1/16W
R181	1-216-837-11	METAL CHIP	22K	5%	1/16W
R182	1-216-837-11	METAL CHIP	22K	5%	1/16W
R183	1-216-837-11	METAL CHIP	22K	5%	1/16W
R191	1-216-839-11	METAL CHIP	33K	5%	1/16W
R192	1-216-839-11	METAL CHIP	33K	5%	1/16W
R193	1-216-847-11	METAL CHIP	150K	5%	1/16W
R194	1-216-843-11	METAL CHIP	68K	5%	1/16W
R195	1-216-851-11	METAL CHIP	330K	5%	1/16W
R196	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R197	1-216-821-11	METAL CHIP	1K	5%	1/16W
		<COMPOSITION CIRCUIT BLOCK>			
RN101	1-233-576-11	RES, CHIP NETWORK 100			
		< SWITCH >			
S101	1-771-853-11	SWITCH, DETECTION (LIMIT)			
		< VIBRATOR >			
X101	1-579-280-11	VIBRATOR, CRYSTAL (16.9344MHz)			

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	A-4731-456-A	CONTROL BOARD, COMPLETE (US,CND)			
	A-4731-469-A	CONTROL BOARD, COMPLETE (AEP,UK)			
	A-4731-474-A	CONTROL BOARD, COMPLETE (SP)			
	A-4731-479-A	CONTROL BOARD, COMPLETE (HK)			
	A-4731-484-A	CONTROL BOARD, COMPLETE (AUS)			
	A-4731-489-A	CONTROL BOARD, COMPLETE (TW)			
	A-4731-494-A	CONTROL BOARD, COMPLETE (KR)			
	A-4731-499-A	CONTROL BOARD, COMPLETE (MX)			
		**********			
		< CAPACITOR >			
C101	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C112	1-124-589-11	ELECT	47uF	20%	16V
C113	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C114	1-162-918-11	CERAMIC CHIP	18PF	5.00%	50V
C115	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C116	1-126-916-11	ELECT	1000uF	20.00%	6.3V
C151	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C152	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C153	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C154	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C165	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C166	1-126-916-11	ELECT	1000uF	20.00%	6.3V
C190	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C201	1-124-589-11	ELECT	47uF	20%	16V
C202	1-136-165-00	FILM	0.1uF	5.00%	50V
C203	1-136-165-00	FILM	0.1uF	5.00%	50V
C204	1-124-261-00	ELECT	10uF	20%	50V
C232	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C241	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C251	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C252	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C253	1-124-261-00	ELECT	10uF	20%	50V
C261	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C262	1-128-834-11	ELECT	470uF	20%	10V
C264	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C265	1-126-176-11	ELECT	220uF	20%	10V
C266	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C267	1-162-953-11	ERAMIC CHIP	100PF	5%	50V
C268	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
C269	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C270	1-128-832-11	ELECT	220uF	20%	10V
C271	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C275	1-164-156-11	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
CN101	1-784-753-11	CONNECTOR, FFC 31P			
CN102	1-784-389-21	CONNECTOR, FFC/FPC 33P			
CN104	1-568-830-11	CONNECTOR, FFC 11P			
CN251	1-568-838-11	CONNECTOR, FFC 21P			
CN252	1-785-317-11	PIN, CONNECTOR (STRAIGHT) 5P			
CN253	1-506-469-11	PIN, CONNECTOR 4P			
		< DIODE >			
D101	8-719-988-61	DIODE 1SS355TE-17			
D102	8-719-988-61	DIODE 1SS355TE-17			
D103	8-719-988-61	DIODE 1SS355TE-17			
D104	8-719-988-61	DIODE 1SS355TE-17			
D106	8-719-988-61	DIODE 1SS355TE-17			
D202	8-719-988-61	DIODE 1SS355TE-17			
D203	8-719-988-61	DIODE 1SS355TE-17			
D204	8-719-988-61	DIODE 1SS355TE-17			
D205	8-719-988-61	DIODE 1SS355TE-17			
D206	8-719-988-61	DIODE 1SS355TE-17			
D207	8-719-988-61	DIODE 1SS355TE-17			
D251	8-719-056-82	DIODE UDZ-TE-17-6.2B			
D252	8-719-051-07	DIODE EC10DA40			
D253	8-719-051-07	DIODE EC10DA40			
D254	8-719-051-07	DIODE EC10DA40			
		<TERMINAL BOARD>			
EP101	1-537-770-21	TERMINAL BOARD, GROUND			
		< FERRITE BEAD/RESISTOR >			
FB115	1-500-445-21	FERRITE	0uH		
FB131	1-216-864-11	METAL CHIP	0	5%	1/16W

CONTROL

Ref. No.	Part No.	Description			Remarks
FB165	1-216-864-11	METAL CHIP	0	5%	1/16W
FB190	1-216-864-11	METAL CHIP	0	5%	1/16W
FB251	1-216-864-11	METAL CHIP	0	5%	1/16W
FB252	1-216-864-11	METAL CHIP	0	5%	1/16W
		< FUSE HOLDER >			
FH901	1-533-217-31	FUSE HOLDER			
FH902	1-533-217-31	FUSE HOLDER			
FH911	1-533-217-31	FUSE HOLDER			
FH912	1-533-217-31	FUSE HOLDER			
FH913	1-533-217-31	FUSE HOLDER			
FH914	1-533-217-31	FUSE HOLDER			
		< IC >			
IC101	6-802-756-01	IC MB90803PF-G-101-BMD			
IC201	8-759-532-64	IC M62703SL-TP			
IC251	8-759-598-69	IC BA6956AN			
		< TRANSISTOR >			
Q203	8-729-120-28	TRANSISTOR 2SC1623-T1-L5L6			
Q211	8-729-120-28	TRANSISTOR 2SC3052F-T1-LF			
Q212	8-729-120-28	TRANSISTOR 2SC3052F-T1-LF			
		< RESISTOR >			
R89	1-216-809-11	METAL CHIP	100	5%	1/16W
R94	1-216-809-11	METAL CHIP	100	5%	1/16W
R95	1-216-809-11	METAL CHIP	100	5%	1/16W
R96	1-216-809-11	METAL CHIP	100	5%	1/16W
R97	1-216-809-11	METAL CHIP	100	5%	1/16W
R98	1-216-821-11	METAL CHIP	1K	5%	1/16W
R99	1-216-809-11	METAL CHIP	100	5%	1/16W
R101	1-216-864-11	METAL CHIP	0	5%	1/16W
R102	1-216-809-11	METAL CHIP	100	5%	1/16W
R103	1-216-809-11	METAL CHIP	100	5%	1/16W
R104	1-216-809-11	METAL CHIP	100	5%	1/16W
R105	1-216-809-11	METAL CHIP	100	5%	1/16W
R106	1-216-809-11	METAL CHIP	100	5%	1/16W
R107	1-216-809-11	METAL CHIP	100	5%	1/16W
R108	1-216-833-11	METAL CHIP	10K	5%	1/16W
R109	1-216-833-11	METAL CHIP	10K	5%	1/16W
R110	1-216-809-11	METAL CHIP	100	5%	1/16W
R111	1-216-809-11	METAL CHIP	100	5%	1/16W
R112	1-216-809-11	METAL CHIP	100	5%	1/16W
R113	1-216-864-11	METAL CHIP	0	5%	1/16W
R114	1-216-841-11	METAL CHIP	47K	5%	1/16W
R115	1-216-833-11	METAL CHIP	10K	5%	1/16W
R116	1-216-833-11	METAL CHIP	10K	5%	1/16W
R117	1-216-809-11	METAL CHIP	100	5%	1/16W
R118	1-216-809-11	METAL CHIP	100	5%	1/16W
R119	1-216-809-11	METAL CHIP	100	5%	1/16W
R120	1-216-809-11	METAL CHIP	100	5%	1/16W
R121	1-216-809-11	METAL CHIP	100	5%	1/16W
R122	1-216-809-11	METAL CHIP	100	5%	1/16W
R123	1-216-843-11	METAL CHIP	68K	5%	1/16W
R124	1-216-809-11	METAL CHIP	100	5%	1/16W
R125	1-216-809-11	METAL CHIP	100	5%	1/16W
R126	1-216-857-11	METAL CHIP	1M	5%	1/16W
R127	1-216-847-11	METAL CHIP	150K	5%	1/16W
R128	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R129	1-216-809-11	METAL CHIP	100	5%	1/16W
R130	1-216-833-11	METAL CHIP	10K	5%	1/16W
R131	1-216-809-11	METAL CHIP	100	5%	1/16W
R132	1-216-833-11	METAL CHIP	10K	5%	1/16W
R133	1-216-809-11	METAL CHIP	100	5%	1/16W
R134	1-216-809-11	METAL CHIP	100	5%	1/16W
R135	1-216-864-11	METAL CHIP	0	5%	1/16W
R136	1-216-817-11	METAL CHIP	470	5%	1/16W
R137	1-216-817-11	METAL CHIP	470	5%	1/16W
R138	1-216-809-11	METAL CHIP	100	5%	1/16W
R139	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R140	1-216-825-11	METAL CHIP	2.2K	5%	1/16W (US,CND)
R140	1-216-821-11	METAL CHIP	1K	5%	1/16W (MX)
R140	1-216-864-11	METAL CHIP	0	5%	1/16W (AEP,UK)
R141	1-216-809-11	METAL CHIP	100	5%	1/16W
R142	1-216-809-11	METAL CHIP	100	5%	1/16W
R143	1-216-809-11	METAL CHIP	100	5%	1/16W
R144	1-216-829-11	METAL CHIP	4.7K	5%	1/16W (US,CND,MX)
R144	1-216-864-11	METAL CHIP	0	5%	1/16W (HK,KR,SP,TW,AUS)
R145	1-216-809-11	METAL CHIP	100	5%	1/16W
R146	1-216-809-11	METAL CHIP	100	5%	1/16W
R147	1-216-809-11	METAL CHIP	100	5%	1/16W
R148	1-216-833-11	METAL CHIP	10K	5%	1/16W
R149	1-216-833-11	METAL CHIP	10K	5%	1/16W
R150	1-216-809-11	METAL CHIP	100	5%	1/16W
R151	1-216-833-11	METAL CHIP	10K	5%	1/16W
R152	1-216-833-11	METAL CHIP	10K	5%	1/16W
R153	1-216-833-11	METAL CHIP	10K	5%	1/16W
R154	1-216-833-11	METAL CHIP	10K	5%	1/16W
R155	1-216-809-11	METAL CHIP	100	5%	1/16W
R156	1-216-809-11	METAL CHIP	100	5%	1/16W
R157	1-216-809-11	METAL CHIP	100	5%	1/16W
R158	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R159	1-216-833-11	METAL CHIP	10K	5%	1/16W
R160	1-216-833-11	METAL CHIP	10K	5%	1/16W
R161	1-216-833-11	METAL CHIP	10K	5%	1/16W
R162	1-216-833-11	METAL CHIP	10K	5%	1/16W
R163	1-216-809-11	METAL CHIP	100	5%	1/16W
R164	1-216-809-11	METAL CHIP	100	5%	1/16W
R165	1-216-809-11	METAL CHIP	100	5%	1/16W
R166	1-216-845-11	METAL CHIP	100K	5%	1/16W
R167	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R168	1-216-833-11	METAL CHIP	10K	5%	1/16W
R169	1-216-833-11	METAL CHIP	10K	5%	1/16W
R170	1-216-833-11	METAL CHIP	10K	5%	1/16W
R193	1-216-864-11	METAL CHIP	0	5%	1/16W
R201	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R203	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R204	1-216-833-11	METAL CHIP	10K	5%	1/16W
R205	1-216-841-11	METAL CHIP	47K	5%	1/16W
R206	1-216-841-11	METAL CHIP	47K	5%	1/16W

Ref. No.	Part No.	Description			Remarks
R207	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R208	1-216-813-11	METAL CHIP	220	5%	1/16W
R209	1-216-833-11	METAL CHIP	10K	5%	1/16W
R212	1-216-813-11	METAL CHIP	220	5%	1/16W
R213	1-216-809-11	METAL CHIP	100	5%	1/16W
R251	1-216-805-11	METAL CHIP	47	5%	1/16W
R252	1-216-813-11	METAL CHIP	220	5%	1/16W
		< VIBRATOR >			
X101	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)			
X102	1-577-360-11	VIBRATOR, CERAMIC (6MHz)			
**********					
	A-4731-461-A	JACK BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C701	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C702	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C703	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C704	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C705	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C706	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C707	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C708	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C709	1-164-156-11	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
CN701	1-568-830-11	CONNECTOR, FFC 11P			
		< TERMINAL BOARD >			
EP701	1-537-770-21	TERMINAL BOARD, GROUND			
		< JACK >			
J701	1-566-891-11	JACK (PHONES)			
J702	1-573-798-11	JACK, MINIATURE (DIA. 3.5)(IN)			
J703	1-573-798-11	JACK, MINIATURE (DIA. 3.5)(OUT)			
		< RESISTOR >			
R701	1-218-867-11	METAL CHIP	6.8K	5%	1/10W
R702	1-216-833-11	METAL CHIP	10K	5%	1/16W
R703	1-218-867-11	METAL CHIP	6.8K	5%	1/10W
R704	1-216-833-11	METAL CHIP	10K	5%	1/16W
R705	1-216-845-11	METAL CHIP	100K	5%	1/16W
R706	1-216-864-11	METAL CHIP	0	5%	1/16W
R707	1-216-845-11	METAL CHIP	100K	5%	1/16W
R708	1-216-864-11	METAL CHIP	0	5%	1/16W
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		LOADING BOARD			
		**********			
		< CONNECTOR >			
CN1	1-785-331-11	PIN, CONNECTOR (LIGHT ANGLE) 5P			
		< SWITCH >			
S1	1-786-514-11	SWITCH, LEVER (SLIDE) (LODING IN/OUT DETECT)			
**********					
	1-687-250-11	PANEL BOARD			
		**********			
	4-244-735-01	PLATE, LIGHT GUIDE			
	4-244-736-01	SHEET (LCD)			
	4-246-812-01	SHEET, REFLECTION			
		< CAPACITOR >			
C401	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C402	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C403	1-162-974-11	CERAMIC CHIP	0.01uF		50V
		< CONNECTOR >			
CN401	1-784-881-21	CONNECTOR,FFC (LIF (NON-ZIF)) 33P			
		< DIODE >			
D401	6-500-646-01	DIODE SECU4E01C (BACK LIGHT)			
D402	6-500-646-01	DIODE SECU4E01C (BACK LIGHT)			
D403	6-500-646-01	DIODE SECU4E01C (BACK LIGHT)			
D404	6-500-646-01	DIODE SECU4E01C (BACK LIGHT)			
		< LIQUID CRYSTAL DISPLAY >			
LCD401	1-805-197-11	DISPLAY PANEL, LIQUID CRYSTAL			
		< RESISTOR >			
R401	1-216-821-11	METAL CHIP	1K	5%	1/16W
R402	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R403	1-216-813-11	METAL CHIP	220	5%	1/16W
R404	1-216-813-11	METAL CHIP	220	5%	1/16W
R405	1-216-813-11	METAL CHIP	220	5%	1/16W
R406	1-216-813-11	METAL CHIP	220	5%	1/16W
R407	1-216-821-11	METAL CHIP	1K	5%	1/16W
R408	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R409	1-216-821-11	METAL CHIP	1K	5%	1/16W
R410	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R411	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R412	1-216-833-11	METAL CHIP	10K	5%	1/10W
R413	1-216-833-11	METAL CHIP	10K	5%	1/10W
R421	1-216-809-11	METAL CHIP	100	5%	1/16W
R422	1-216-809-11	METAL CHIP	100	5%	1/16W
R423	1-216-809-11	METAL CHIP	100	5%	1/16W
R424	1-216-809-11	METAL CHIP	100	5%	1/16W
R425	1-216-809-11	METAL CHIP	100	5%	1/16W
R426	1-216-809-11	METAL CHIP	100	5%	1/16W
R427	1-216-809-11	METAL CHIP	100	5%	1/16W
R428	1-216-809-11	METAL CHIP	100	5%	1/16W
R429	1-216-809-11	METAL CHIP	100	5%	1/16W
R430	1-216-809-11	METAL CHIP	100	5%	1/16W
R431	1-216-809-11	METAL CHIP	100	5%	1/16W
R432	1-216-809-11	METAL CHIP	100	5%	1/16W
R433	1-216-809-11	METAL CHIP	100	5%	1/16W
R434	1-216-809-11	METAL CHIP	100	5%	1/16W
R435	1-216-809-11	METAL CHIP	100	5%	1/16W
R436	1-216-809-11	METAL CHIP	100	5%	1/16W
R437	1-216-809-11	METAL CHIP	100	5%	1/16W

PANEL | POWER

Ref. No.	Part No.	Description			Remarks
R438	1-216-809-11	METAL CHIP	100	5%	1/16W
R439	1-216-809-11	METAL CHIP	100	5%	1/16W
R440	1-216-809-11	METAL CHIP	100	5%	1/16W
R441	1-216-809-11	METAL CHIP	100	5%	1/16W
R442	1-216-809-11	METAL CHIP	100	5%	1/16W
R443	1-216-809-11	METAL CHIP	100	5%	1/16W
R444	1-216-809-11	METAL CHIP	100	5%	1/16W
R445	1-216-809-11	METAL CHIP	100	5%	1/16W
R446	1-216-809-11	METAL CHIP	100	5%	1/16W
R447	1-216-809-11	METAL CHIP	100	5%	1/16W
		< SWITCH >			
S401	1-762-333-21	SWITCH, TACTILE (I/⏻)			
S402	1-762-333-21	SWITCH, TACTILE (DIMMER)			
S403	1-762-333-21	SWITCH, TACTILE (VOLUME +)			
S404	1-762-333-21	SWITCH, TACTILE (VOLUME -)			
S405	1-762-333-21	SWITCH, TACTILE (FUCTION)			
S406	1-762-333-21	SWITCH, TACTILE (+ ▶▶I)			
S407	1-762-333-21	SWITCH, TACTILE (I◀◀ -)			
S408	1-762-333-21	SWITCH, TACTILE (■)			
S409	1-762-333-21	SWITCH, TACTILE (▶II)			
S410	1-762-333-21	SWITCH, TACTILE (⏏)			
**********					
	A-4731-453-A	POWER BOARD, COMPLETE (US,CND)			
	A-4731-467-A	POWER BOARD, COMPLETE (AEP,UK)			
	A-4731-472-A	POWER BOARD, COMPLETE (SP)			
	A-4731-477-A	POWER BOARD, COMPLETE (HK)			
	A-4731-482-A	POWER BOARD, COMPLETE (AUS)			
	A-4731-487-A	POWER BOARD, COMPLETE (TW)			
	A-4731-492-A	POWER BOARD, COMPLETE (KR)			
	A-4731-497-A	POWER BOARD, COMPLETE (MX)			
		**********			
	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3			
		< CAPACITOR >			
C301	1-124-261-00	ELECT	10uF	20%	50V
C302	1-136-165-00	MYLAR	0.1uF	5.00%	50V
C303	1-136-165-00	MYLAR	0.1uF	5.00%	50V
C304	1-130-476-00	MYLAR	0.0027uF	5%	50V
C305	1-126-163-11	ELECT	4.7uF	20%	50V
C306	1-126-163-11	ELECT	4.7uF	20%	50V
C307	1-126-163-11	ELECT	4.7uF	20%	50V
C308	1-126-163-11	ELECT	4.7uF	20%	50V
C309	1-126-163-11	ELECT	4.7uF	20%	50V
C310	1-124-261-00	ELECT	10uF	20%	50V
C311	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C312	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C313	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C315	1-128-499-11	ELECT	220uF	20.00%	16V
C316	1-119-774-11	ELECT	100uF	20.00%	16V
C317	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C351	1-124-261-00	ELECT	10uF	20%	50V
C352	1-136-165-00	YLAR	0.1uF	5.00%	50V
C353	1-136-165-00	MYLAR	0.1uF	5.00%	50V
C354	1-130-476-00	MYLAR	0.0027uF	5%	50V
C355	1-126-163-11	ELECT	4.7uF	20%	50V
C356	1-126-163-11	ELECT	4.7uF	20%	50V
C357	1-126-163-11	ELECT	4.7uF	20%	50V

Ref. No.	Part No.	Description			Remarks
C358	1-126-163-11	ELECT	4.7uF	20%	50V
C359	1-126-163-11	ELECT	4.7uF	20%	50V
C360	1-124-261-00	ELECT	10uF	20%	50V
C367	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C613	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C614	1-107-713-11	ELECT	4.7uF	20.00%	50V
C621	1-164-362-11	CERAMIC CHIP	470PF	5.00%	50V
C651	1-128-551-11	ELECT	22uF	20.00%	25V
C652	1-126-916-11	ELECT	1000uF	20.00%	6.3V
C671	1-164-362-11	CERAMIC CHIP	470PF	5.00%	50V
C802	1-136-165-00	FILM	0.1uF	5.00%	50V
C803	1-119-823-11	ELECT	4.7uF	20%	50V
C805	1-119-799-11	ELECT	47uF	20%	25V
C806	1-162-956-11	CERAMIC CHIP	180PF	5%	50V
C807	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C808	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C809	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C810	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C814	1-162-951-11	CERAMIC CHIP	68PF	5%	50V
C821	1-126-933-11	ELECT	100uF	20.00%	16V
C822	1-126-967-11	ELECT	47uF	20.00%	50V
C823	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C852	1-136-165-00	FILM	0.1uF	5.00%	50V
C853	1-119-823-11	ELECT	4.7uF	20%	50V
C855	1-119-799-11	ELECT	47uF	20%	25V
C856	1-162-956-11	CERAMIC CHIP	180PF	5%	50V
C857	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C858	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C859	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C860	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C864	1-162-951-11	CERAMIC CHIP	68PF	5%	50V
C901	1-104-665-11	ELECT	100uF	20.00%	10V
C903	1-126-767-11	ELECT	1000uF	20.00%	16V
C904	1-136-165-00	FILM	0.1uF	5.00%	50V
C905	1-136-165-00	FILM	0.1uF	5.00%	50V
⚠C906	1-113-925-11	CERAMIC	0.01uF	20.00%	250V
C907	1-124-257-11	ELECT	2.2uF	20.00%	50V
C911	1-126-953-11	ELECT	2200uF	20.00%	35V
C912	1-126-953-11	ELECT	2200uF	20.00%	35V
C913	1-136-165-00	FILM	0.1uF	5.00%	50V
C914	1-136-165-00	FILM	0.1uF	5.00%	50V
C915	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C921	1-128-551-11	ELECT	22uF	20.00%	25V
C922	1-126-947-11	ELECT	47uF	20.00%	25V
C925	1-128-551-11	ELECT	22uF	20.00%	25V
C926	1-126-947-11	ELECT	47uF	20.00%	25V
C927	1-126-944-11	ELECT	3300uF	20.00%	25V
C928	1-136-165-00	FILM	0.1uF	5.00%	50V
C929	1-136-165-00	FILM	0.1uF	5.00%	50V
C931	1-128-551-11	ELECT	22uF	20.00%	25V
C932	1-126-947-11	ELECT	47uF	20.00%	25V
		< CONNECTOR >			
CN603	1-784-792-11	CONNECTOR, FFC 31P			
CN604	1-568-830-11	CONNECTOR, FFC 11P			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remarks
CN605	1-568-830-11	CONNECTOR, FFC 11P	
CN801	1-816-048-11	TERMINAL BOARD (SPEAKER)	
⚠CN901	1-564-321-00	PIN, CONNECTOR (3.96mm PITCH) 2P	
⚠CN902	1-564-321-21	PIN, CONNECTOR (3.96mm PITCH) 2P	
CN903	1-691-767-11	PLUG (MICRO CONNECTOR) 5P	
		< DIODE >	
D651	8-719-988-61	DIODE 1SS355TE-17	
D821	8-719-988-61	DIODE 1SS355TE-17	
D901	8-719-051-07	DIODE EC10DA40	
D902	8-719-051-07	DIODE EC10DA40	
D903	8-719-051-07	DIODE EC10DA40	
D904	8-719-051-07	DIODE EC10DA40	
D905	8-719-988-61	DIODE 1SS355TE-17	
D907	8-719-988-61	DIODE 1SS355TE-17	
D908	8-719-988-61	DIODE 1SS355TE-17	
D911	8-719-500-56	DIODE D3SBA20	
D912	8-719-975-85	DIODE 21DQ04N-TA2	
D913	8-719-975-85	DIODE 21DQ04N-TA2	
D914	8-719-975-85	DIODE 21DQ04N-TA2	
D915	8-719-975-85	DIODE 21DQ04N-TA2	
		< TERMINAL BOARD >	
EP901	1-537-770-21	TERMINAL BOARD, GROUND	
EP902	1-537-770-21	TERMINAL BOARD, GROUND (US,CND)	
		< IC >	
IC301	8-759-669-03	IC LC75342	
IC801	8-759-333-24	IC LM1876TF	
IC901	6-703-627-01	IC NJU7201L40 (T3)	
IC911	8-759-445-59	IC BA033T	
IC913	8-759-701-59	IC TA7809S	
IC914	6-701-760-01	IC uPC3504AHF	
		< COIL >	
L801	1-422-009-13	COIL, AIR-CORE	
L851	1-422-009-13	COIL, AIR-CORE	
		< TRANSISTOR >	
Q601	8-729-046-97	TRANSISTOR 2SD1938 (F) -T (TX) .SO	
Q602	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q603	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q604	8-729-046-97	TRANSISTOR 2SD1938 (F) -T (TX) .SO	
Q605	8-729-046-97	TRANSISTOR 2SD1938 (F) -T (TX) .SO	
Q654	8-729-046-97	TRANSISTOR 2SD1938 (F) -T (TX) .SO	
Q822	8-729-120-28	TRANSISTOR 2SC1623-T1-L5L6	
Q823	8-729-120-28	TRANSISTOR 2SC1623-T1-L5L6	
Q824	8-729-120-28	TRANSISTOR 2SC1623-T1-L5L6	
Q901	8-729-120-28	TRANSISTOR 2SC1623-T1-L5L6	
Q902	8-729-602-36	TRANSISTOR 2SA1602TP-1EF	
Q911	6-550-185-01	TRANSISTOR RT1P137P-TP-1	
Q912	8-729-900-53	TRANSISTOR DTC114EKA-T146	
		< RESISTOR >	
R301	1-216-827-11	METAL CHIP 3.3K 5% 1/16W	
R311	1-216-809-11	METAL CHIP 100 5% 1/16W	
R312	1-216-809-11	METAL CHIP 100 5% 1/16W	
R313	1-216-809-11	METAL CHIP 100 5% 1/16W	
R314	1-216-864-11	METAL CHIP 0 5% 1/16W	
R315	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R351	1-216-827-11	METAL CHIP 3.3K 5% 1/16W	
R365	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R609	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R610	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R611	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R612	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R613	1-216-827-11	METAL CHIP 3.3K 5% 1/16W	
R614	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R616	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R619	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R620	1-216-827-11	METAL CHIP 3.3K 5% 1/16W	
R621	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R622	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R625	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R626	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R631	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R632	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R651	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R652	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R659	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R660	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R661	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R681	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R682	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R801	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R802	1-216-838-11	METAL CHIP 27K 5% 1/16W	
R803	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R804	1-216-836-11	METAL CHIP 18K 5% 1/16W	
R805	1-216-797-11	METAL CHIP 10 5% 1/16W	
R806	1-260-320-11	CARBON 220 5% 1/2W	
R807	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R808	1-260-076-11	CARBON 10 5% 1/2W	
R809	1-216-797-11	METAL CHIP 10 5% 1/16W	
R821	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R822	1-216-842-11	METAL CHIP 56K 5% 1/16W	
R823	1-260-090-51	CARBON 180 5% 1/2W (US,CND,MX,TW)	
R823	1-260-163-11	CARBON 200 5% 1/2W (EXCEPT US,CND,MX,TW)	
R824	1-216-864-11	METAL CHIP 0 5% 1/16W	
R851	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R852	1-216-838-11	METAL CHIP 27K 5% 1/16W	
R853	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R854	1-216-836-11	METAL CHIP 18K 5% 1/16W	
R855	1-216-797-11	METAL CHIP 10 5% 1/16W	
R856	1-260-320-11	CARBON 220 5% 1/2W	
R857	1-216-842-11	METAL CHIP 56K 5% 1/16W	
R858	1-260-076-11	CARBON 10 5% 1/2W	
R859	1-216-797-11	METAL CHIP 10 5% 1/16W	
R902	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
⚠R906	1-219-237-11	SOLID 3.3M 20% 1/2W (US,CND)	

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POWER REG REMOCON

Ref. No.	Part No.	Description			Remarks
R907	1-216-821-11	METAL CHIP	1K	5% 1/16W	
R908	1-216-821-11	METAL CHIP	1K	5% 1/16W	
R909	1-216-825-11	METAL CHIP	2.2K	5% 1/16W	
R910	1-216-864-11	METAL CHIP	0	5% 1/16W	
⚠R911	1-219-119-11	FUSIBLE	0.1	5% 1/4W	
R912	1-216-829-11	METAL CHIP	4.7K	5% 1/16W	
R913	1-216-817-11	METAL CHIP	470	5% 1/16W	
R914	1-216-809-11	METAL CHIP	100	5% 1/16W	
		< RELAY >			
RY801	1-755-170-11	RELAY (12V)			
⚠RY901	1-755-467-11	RELAY (POWER)			
		< TRANSFORMER >			
⚠T902	1-437-672-21	TRANSFORMER, POWER (US,CND,TW,MX)			
⚠T902	1-437-673-21	TRANSFORMER, POWER (AEP,UK,HK,KR,SP,AUS)			
**********					
	A-4732-629-A	REG BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C961	1-107-888-11	ELECT	47uF	20.00% 25V	
C962	1-107-907-11	ELECT	22uF	20.00% 25V	
		< CONNECTOR >			
CN961	1-785-315-11	PIN, CONNECTOR (STRAIGHT) 3P			
		< IC >			
IC961	8-759-701-59	IC TA7809S			
**********					
	A-4731-459-A	REMOCON BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C501	1-124-589-11	ELECT	47uF	20% 16V	
C502	1-164-156-11	CERAMIC CHIP	0.1uF	25V	
		< CONNECTOR >			
CN501	1-506-469-11	PIN, CONNECTOR 4P			
		< DIODE >			
D501	8-719-055-70	DIODE SEL6210S-D-TP5 (STAND BY)			
		< IC >			
IC501	8-759-826-32	IC NJL72H400A			
		< RESISTOR >			
R501	1-216-805-11	METAL CHIP	47	5% 1/16W	
R502	1-216-864-11	METAL CHIP	0	5% 1/16W	
R503	1-216-817-11	METAL CHIP	470	5% 1/16W	
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Ref. No.	Part No.	Description	Remarks
		MISCELLANEOUS	
		**********	
101	1-693-603-31	TUNER (FM/AM) (HK,SP,TW,MX,AUS)	
101	1-693-605-11	TUNER (FM/AM) (AEP,UK,KR)	
101	1-693-623-11	TUNER (FM/AM)(FOR BLACK)(US,CND)	
101	1-693-623-31	TUNER (FM/AM)(FOR WHITE)(US,CND)	
102	1-765-324-11	FFC 11P	
103	1-765-324-11	FFC 11P	
⚠107	1-769-079-22	CORD, POWER (KR)	
⚠107	1-775-790-11	CORD, POWER (AUS)	
⚠107	1-777-071-83	CORD, POWER (AEP,UK,HK,SP,TW)	
⚠107	1-783-531-11	CORD, POWER (US,CND)	
⚠107	1-827-226-11	CORD, POWER (MX)	
156	1-827-558-11	FFC 21P (150)	
157	1-827-559-11	FFC 33P (425)	
159	1-773-320-11	FFC 31P (150)	
212	1-792-024-11	WIRE (FLAT TYPE)(16 CORE)	
263	1-452-925-21	MAGNET ASSY	
⚠604	8-820-020-02	OPTICAL PICK-UP (KSS-213D/Q-RP)	
⚠F901	1-533-451-11	FUSE, GLASS TUBE (DIA. 5)(3.15A 125V)	(US,CND)
⚠F901	1-533-470-11	FUSE, GLASS TUBE (DIA. 5)(T3.15AL 250V)	(EXCEPT UC,CND)
⚠F911	1-533-449-11	FUSE, GLASS TUBE (DIA. 5)(2.0A 125V)	(US,CND)
⚠F911	1-533-467-11	FUSE, GLASS TUBE (T1.6A 250V)	(EXCEPT US,CND)
⚠F912	1-533-449-11	FUSE, GLASS TUBE (DIA. 5)(2.0A 125V)	(US,CND)
⚠F912	1-533-467-11	FUSE, GLASS TUBE (T1.6A 250V)	(EXCEPT US,CND)
M102	X-2625-769-1	GEAR ASSY (MB)(RP), MORTOR(SLED)	
⚠T901	1-439-715-11	TRANSFORMER, POWER (US,CND,TW,MX)	
⚠T901	1-439-716-11	TRANSFORMER, POWER (AEP,UK,SP,AUS)	
⚠T901	1-439-717-11	TRANSFORMER, POWER (HK,KR)	
**********			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

MEMO

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2003.05	New
1.1	2003.06	Change of the specifications Addition of Part No. for Ref. No. 156 and 157 on Exploded Views (ENG-03004)
1.2	2004.10	Addition of Part No. for Ref. No. 156 and 157 on Miscellaneous (SPM-040107)
1.3	2005.01	Addition of Ref. No. 266 (CD Mechanism Deck Section-2) (SPM-05004)

SS-CCQ1

SERVICE MANUAL

Ver 1.0 2003. 05

US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model

- SS-CCQ1 is the speaker system in CMT-CQ1.

SPECIFICATIONS

Speaker system	2 way, bass-reflex type
Speaker units	
Woofer:	10 cm dia., cone type
Tweeter:	2.5 cm dia., balanced dome type
Nominal impedance	6 ohms
Dimensions (w/h/d)	Approx. 140 × 275 × 235 mm
Mass	Approx. 1.3 kg net per speaker

Design and specifications are subject to change without notice.

SPEAKER SYSTEM

9-877-324-01
2003E1600-1
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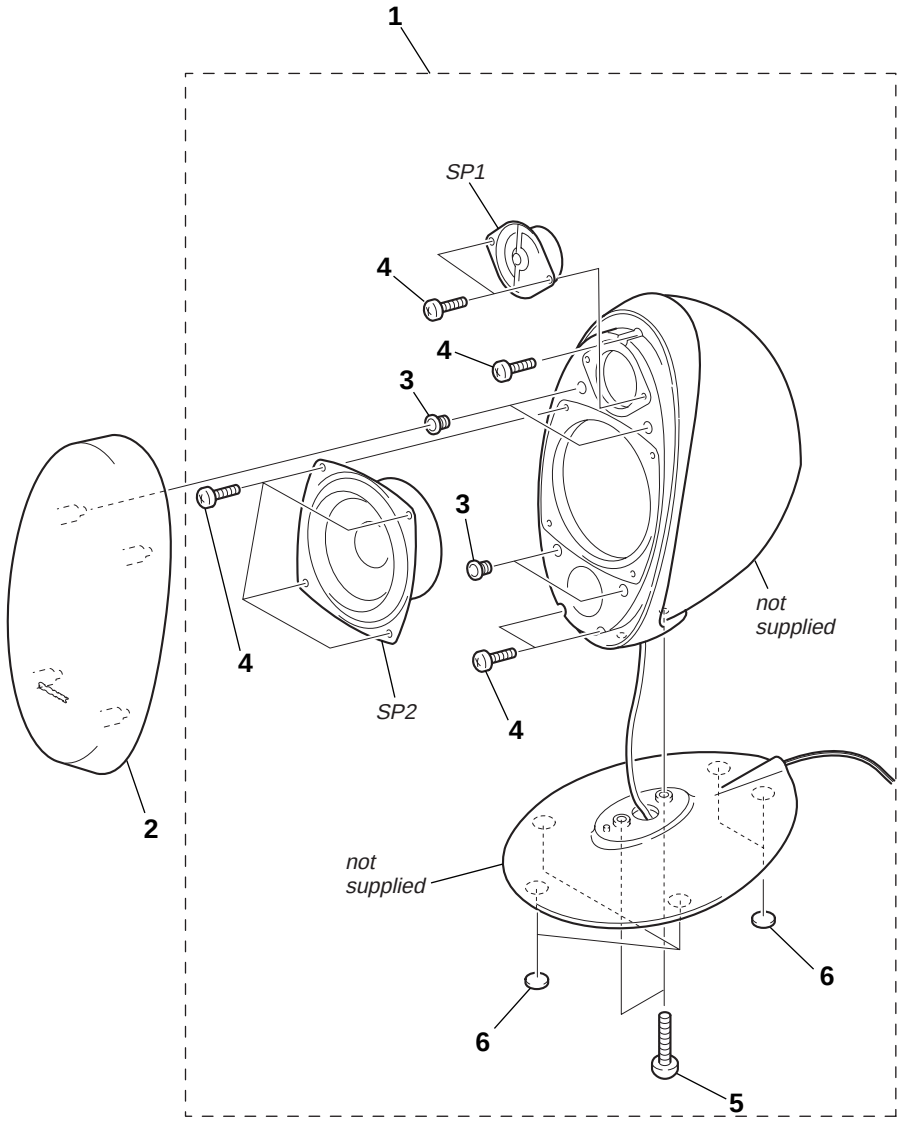
Sony Corporation
Home Audio Company
Published by Sony Engineering Corporation

SONY®

EXPLODED VIEW AND PARTS LIST

NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ Parts Color ↑ Cabinet's Color
- Abbreviation
  AUS : Australian model.
  CND : Canadian model.
  HK : Hong Kong model.
  KR : Korean model.
  MX : Mexican model.
  SP : Singapore model.
  TW : Taiwan model.



Ref. No.	Part No.	Description	Remarks
1	A-4739-228-A	SYSTEM ASSY (WHITE) (US,CND,AEP,UK,HK,KR,SP,TW,MX,AUS)	
1	A-4739-284-A	SYSTEM ASSY (BLACK) (US,CND)	
2	X-4955-273-1	FRAME ASSY, GRILLE (WHITE) (US,CND,AEP,UK,HK,KR,SP,TW,MX,AUS)	
2	X-4955-597-1	FRAME ASSY, GRILLE (BLACK) (US,CND)	
3	4-912-253-01	CATCHER	
4	4-874-614-11	SCREW (1) (3.5X14), TAPPING	
5	4-238-408-11	SCREW (1) (4X25), +BV TAPPING	
6	4-240-321-01	FOOT	
SP1	1-504-889-12	SPEAKER (10cm)	
SP2	1-504-912-11	SPEAKER (2.5cm)	

MEMO

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